CANON REPAIR MANUAL

CANON CAMERA MODEL FX

(REFERENCE NO. 1-20301)

CANON CAMERA COMPANY, INC.

TOKYO, JAPAN

CANON SERVICE MANUAL

CANON INC. JAPAN

PREFACE

This manual is the guide for service after sales which we issue for the purpose of quality assurance of our products. This manual consists of six sections, i.e., General, Repair Manual, Repair Guide, Service Tools List, Price List of Spare Parts and Service Manual Report.

If any repaires are required, refer to Repair Manual, Repair Guide and Service Tools List.

A revised edition Will be issued for any major alteration of the product, and minor changes will be issued under the Service Manual Report.

When parts are needed, it is important to order them by specifying the serial numbers and filling in the provided form, and also for any further details regarding tools, refer to the catalogue.

Any commentents or requests about this manual or product will be highly appreciated.

Canon Inc. SERVICE DEPARTMENT
30-2, Shimomaruko 3 Chome, Ohtaku,
Tokyo, Japan

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HOW TO USE THIS SERVICE MANUAL

Canon Service Manual consists of the following six sections: General, Repair Manual, Repair Guide, Service Tools List, Price List of Spare Parts and Service Manual Reports, which will be issued if the outward appearence, function or design of the product is changed. These six sections are divided by index sheets for easy identification.

GENERAL

The General section consists of information useful to the repairman. It may consist of any or all of the following: technical specifications, design principals, circuit explanations, new or unusual repair technics, or any other information useful to the repairman.

REPAIR MANUAL

1. Repair Manual consists of the Exploded Views, Parts List of various portions of the product and Index of Parts Numbers.
2. Parts shown in an Exploded View are all listed on its right page being classified according to their mechanism.
3. An Exploded View and its corresponding Parts List are arranged under the same page number.
4. The Exploded Views are arranged according to the correct procedure of disassembling the Canon product but you may not always follow this order exactly when you remove a certain part. Sometimes you can carry out your purpose by removing only one part of this disassembling procedure.
5. The Table of Contents is arranged in the names of each mechanism. When you want to identify a part in exposure meter, see the item, EXPOSURE METER in the table and see the page indicated.
6. Such a part as 19-9775 that can be disassembled into still more several parts is shown in the Parts List with the explanatory indented column.

   e.g. 19-9775 Top Cover (B.P.)
   13-7095 Meter Window
   13-7160 Counter Window

7. When more than one piece of an identical part is used in a portion of the product, we indicate it by multiplying the part's name by its quantity.

   e.g. X24-170228 Screw ⋅ 4

8. When several part numbers are shown in square brackets, choose the suitable one of these parts according to the condition.

   e.g. [X32-505211 / X32-505212] Washer ⋅ N

   For the most cases, the difference is in thickness of the washer.
9. When a part name is multiplied by N as in

   X32-504621 Washer ⋅ N,

   use suitable numbers of the part accrding to the ondition.
10. (B.P.) is the abbreviation of Bonding Part.

11. The part number of the part which can be supplied as a separate service part though it is one of the components of a bonding part, such as the Window or the Light Shield, is shown in the round brackets. The bonding part in this case includes those parts above said when ordered as the form of the bonding part.
12. When you want to identify a part from its part number, see the Index of Parts Numbers at the end of the repair manual.

REPAIR GUIDE

1. On the supposition of the most various troubles with the products that might happen, Repair Guide presents as many troubles, causes and remedies for them as possible. But we Canon Inc. firmly believe that none of these troubles can happen.
2. The troubles are classified according to their mechanism as they are shown in the Table of Contents. Several causes are shown to one trouble and the remedies are arranged according to the causes.

SERVICE TOOLS LIST

1. Service Tools List is the list in which the names and uses of the testing equipments required for the service after sales are given.
2. As for the specifications and uses about these testing equipments in details, refer to the instruction the Service Manual Report prepared for each testing equipment.
3. Special screwdrivers are listed in numerical order, e.g, in the sign of a special screwdriver T06A-13-8033-1, the number 13-8033 stands for the parts number of the parts which should be attached or removed by this special screwdriver.

PRICE LIST OF SPARE PARTS

1. Price List of Spare Parts presents the unit price of the service parts you received from us.
2. The unit price is F.O.B. Tokyo/Yokohama.
3. The page number on the Repair Manual in which each part is described is shown on the right side of each part so that you may easily identify.
4. All the prices of the Spare Parts on the Price List section are subject to change without notice.

SERVICE MANUAL REPORT

Service Manual Report is for the purpose of giving a prompt and exact information when some revisions are made on the products, namely, when the products are partly changed by the rationalization of production, the development of function, change of outward appearance and so on. Therefore, Service Manual Report is to be published whenever any revision is made on the products.

CANON REPAIR MANUAL

CANON CAMERA MODEL FX

(REFERENCE NO. 1-20301)

CANON CAMERA COMPANY, INC.

TOKYO, JAPAN

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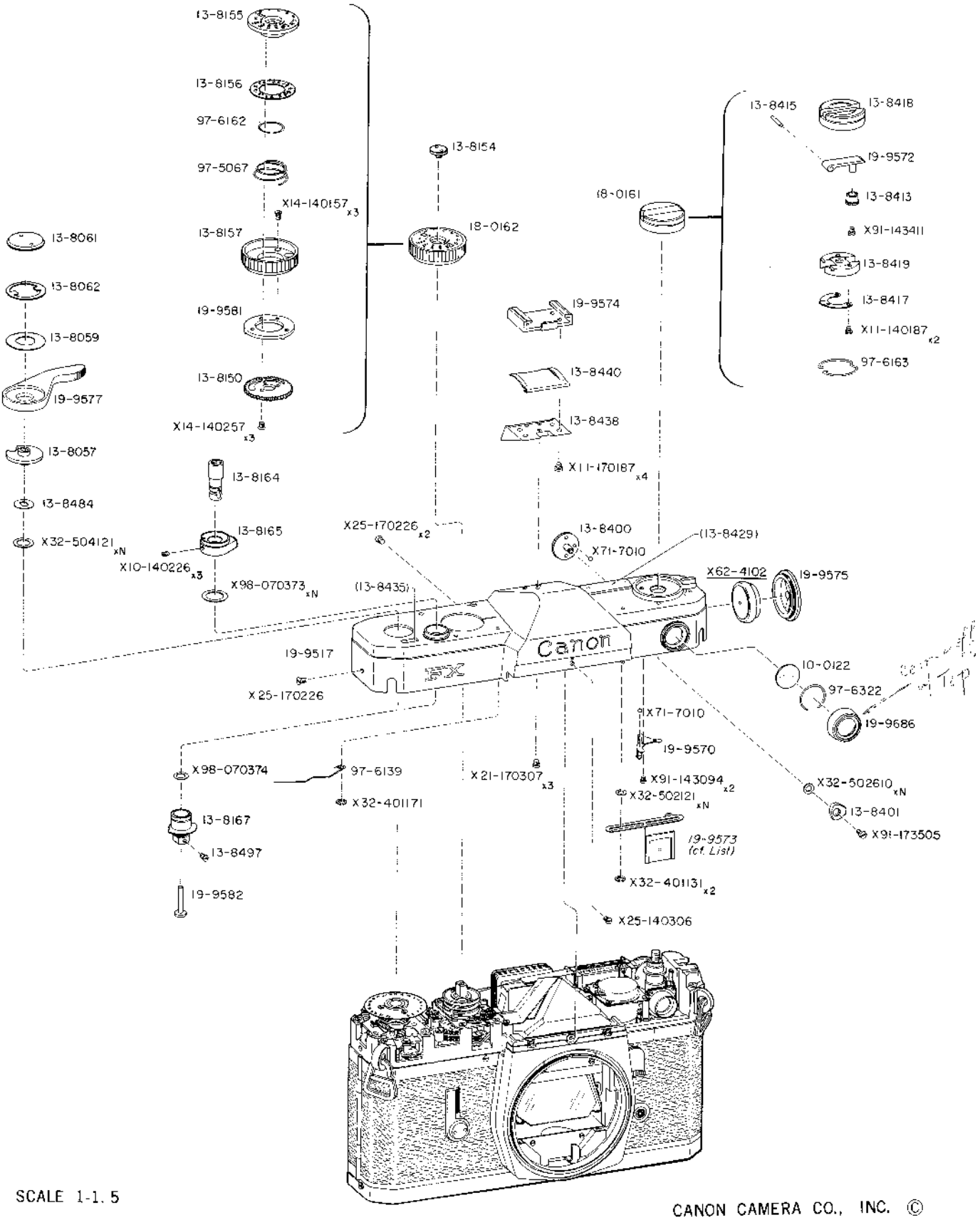
EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

TOP COVER

10-0122	Frsnel Lens
13-8400	Meter Switch Knob
13-8401	Meter Switch Cam
19-9517	Top Cover (B.P.)
13-8429	Meter Window
13-8435	Counter Window
19-9573	Pin Hole Filter (B.P.)

n.b. This parts is included in the Meter Unit 18-0131 and not supplied as a single parts (cf.p.2).

19-9570	Click Spring (B.P.)
19-9575	Battery Cap (B.P.)
19-9686	CdS Window (B.P.)
97-6322	Spring
X25-140306	Screw
X25-170226	Screw × 3
X32-401131	Retaining Washer × 2
[X32-502121 X32-502122]	Washer × N
[X32-502610 X32-502611]	Washer × N
X71-7001	Steel Ball × 2
X91-143094	Screw × 2
X91-173505	Screw
X62-4102	Marcury Battery

n.b. Mercury Battery has a parts number X62-4162, but it is not dealt with one of the repair parts.

REWIND CRANK

18-0161	Rewind Crank (Unit)
13-8413	Rewind Crank Head
13-8415	Pivot
13-8417	Click Spring
13-8418	Rewind Knob
13-8419	Rewind Crank Holder
19-9572	Rewind Crank (B.P.)
97-6163	Spring
X11-140187	Screw × 2

SHUTTER DIAL

13-8154	Pin Face Screw
18-0162	Shutter Speed Dial (Unit)
13-8150	Film Speed Setting Disk
13-8155	Shutter Speed Dial
13-8156	Film Speed Dial
13-8157	Knurled Knob
19-9581	Film Speed Setting Claw (B.P.)
97-5067	Coil Spring
97-6162	Spring
X14-140157	Screw × 3
X14-140257	Screw × 3

SHUTTER BUTTON (cf. p. 9)

13-8164	Shutter Button
13-8165	Shutter Button Ring
13-8167	Shutter Button Sleeve
13-8497	Guide Screw
19-9582	Shutter Button Shaft (B.P.)
97-6139	Spring
X10-140226	Screw × 3
X32-401171	Retaining Washer
[X98-070372 X98-070373 X98-070374]	Washer × N

ACCESSORY SHOE

13-8438	Accessory Shoe Holder
13-8440	Plate Spring
19-9574	Accessory Shoe (B.P.)
X11-170187	Screw × 4
X21-170307	Screw × 3

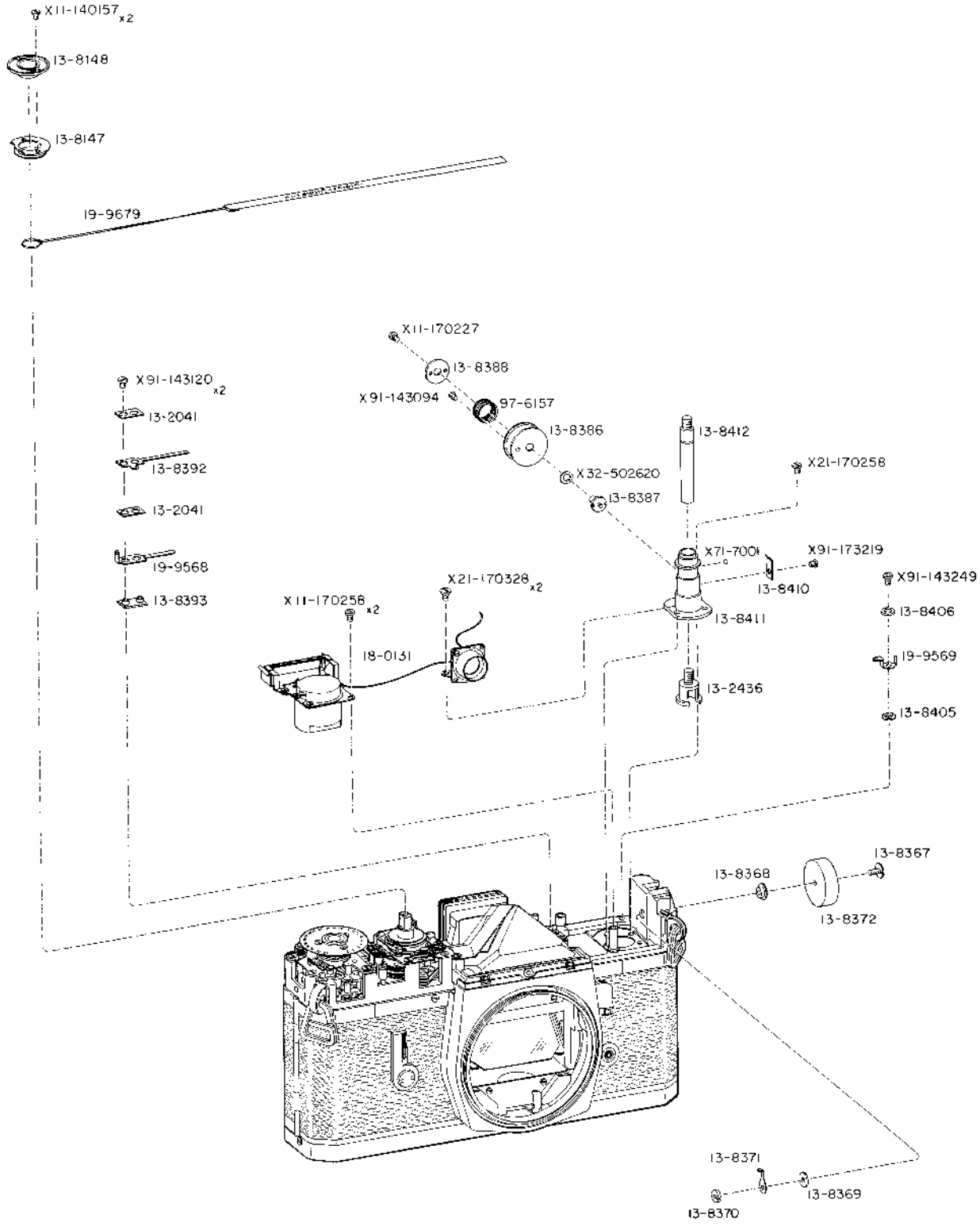
WINDING LEVER (cf. p. 8)

13-8057	Winding Lever Seat
13-8059	Spring Washer
13-8061	Pin Face Screw
13-8062	Washer
13-8484	Washer
19-9577	Winding Lever (B.P.)
[X32-504121 X32-504122]	Washer × N

EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

CdS METER (cf. pp. 1 & 12)

13-8147	Pulley
13-8148	Pulley Cap
13-8386	Pulley
13-8387	Pulley Shaft
13-8388	Spring Hanger
18-0131	CdS Meter (Unit)
(It contains 19-9573,Pin Hole Filter)(B.P.)(cf.P.1).	
19-9679	Meter Scale (B.P.)
97-6157	Spring
X11-140157	Screw × 2
X11-170227	Screw
X11-170258	Screw × 2
X21-170328	Screw × 2
X32-502620	Washer × N
X32-502621	
X91-143094	Screw

METER CONTACT

13-2041	Insulator · 2
13-8367	Pin Face Screw
13-8368	Insulator
13-8369	Insulator
13-8370	Nut
13-8371	Lug
13-8372	Battery Cover
13-8392	Contact
13-8393	Insulator
13-8405	Insulator
13-8406	Insulator
19-9568	Checker Contact (B.P.)
19-9569	Meter Contact (B.P.)
X91-143120	Screw × 2
X91-143249	Screw

REWIND SHAFT (cf. p1)

13-2436	Rewind Fork
13-8410	Click Spring
13-8411	Bearing
13-8412	Rewind Shaft
X21-170258	Screw
X71-7001	Steel Ball
X91-173219	Screw

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EXPLODED VIEW

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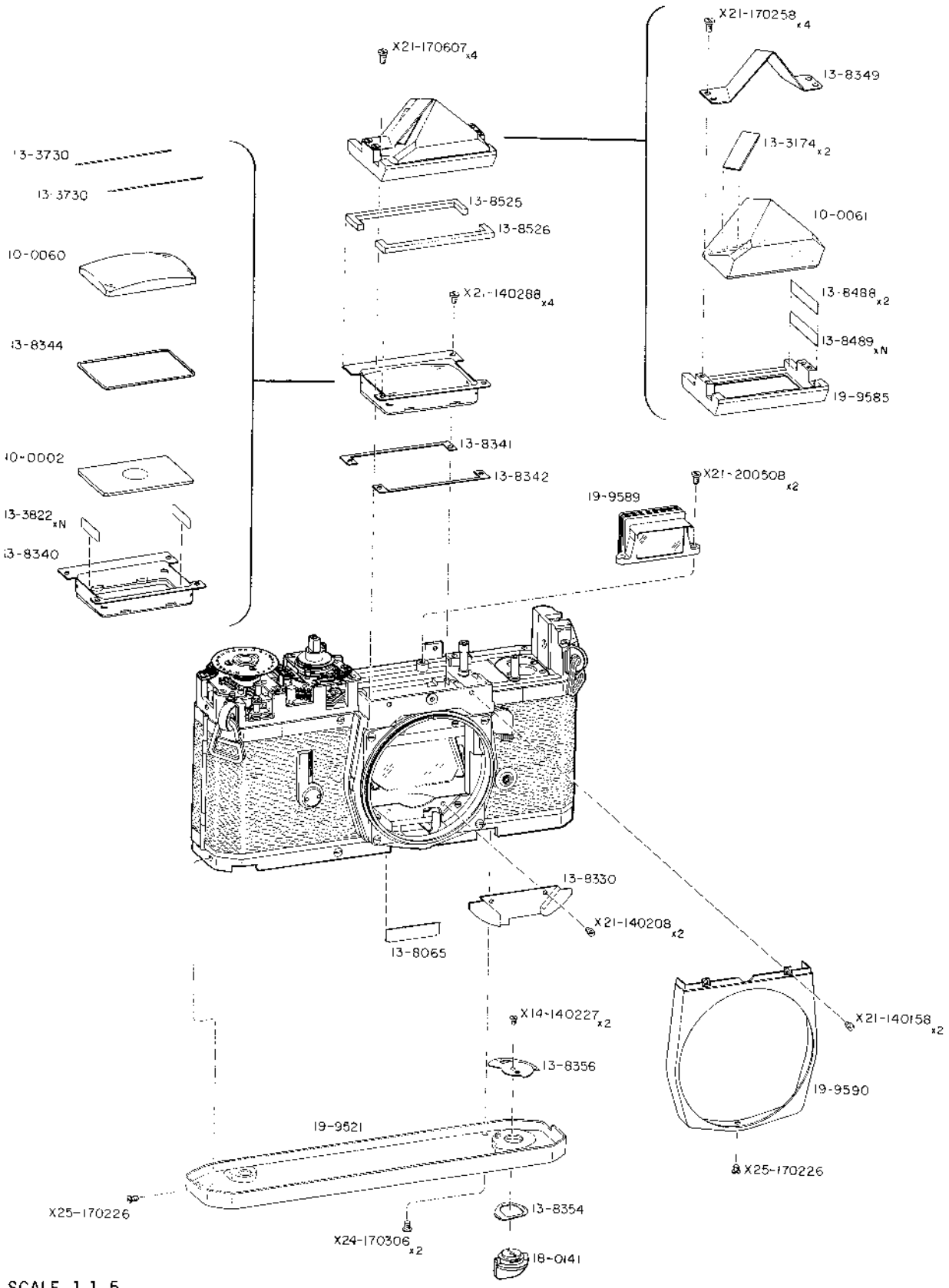

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PARTS LIST

EYE-LEVEL FINDER

10-0061	Pentaprism
13-3174(0.7) 13-3174(1) 13-3174(1.4)	Cork Such numbers(0.7), (1) and(1.4) indicate thickness of Corks. (unit:mm)
13-8349	Pentaprism Supporter
13-8488	Shim × 2
13-8489	Shim × N
13-8525	Light Shield
13-8526	Light Shield
19-9585	Pentaprism Box (B.P.)
X21-170258	Screw × 4
X21-170607	Screw × 4

GROUND GLASS

10-0002 10-0024	Ground Glass
10-0060	Condencer Lens
13-3730	Retainer × 2
13-3822(0.2) 13-3822(0.3) 13-3822(0.4) 13-3822(0.5)	Adjusting Washer × N Such numbers(0.2), (0.3) and(0.4) indicate thickness of Adjusting Washers. (unit: mm)
13-8340	Ground Glass Holder
13-8341(0.03) 13-8341(0.05) 13-8341(0.07) 13-8341(0.1) 13-8341(0.2)	Adjusting Washer × N Such numbers(0.03), (0.05) and(0.07) indicate thickness of Adjusting Washers. (unit: mm)
13-8342(0.03) 13-8342(0.05) 13-8342(0.07) 13-8342(0.1) 13-8342(0.2)	Adjusting Washer × N Such numbers(0.03), (0.05) and(0.07) indicate thickness of Adjusting Washers. (unit:mm)
13-8344	Mask
X21-140288	Screw × 4

EYEPIECE

19-9589	Eyepiece (B.P.)
X21-200508	Screw × 2

BASE PLATE

13-8065(0.9) 13-8065(1.2)	Light Shield
13-8354	Spring Washer
13-8356	Back Cover Lock Lever
18-0141	Back Cover Lock Key (Unit)
19-9521	Base Plate (B.P.)
X14-140227	Screw × 2
X24-170306	Screw × 2
X25-170226	Screw

FRONT COVER

13-8330	Light Shield
19-9590	Front Cover (B.P.)
X21-140158	Screw × 2
X21-140208	Screw × 2
X25-170226	Screw

EXPLODED VIEW

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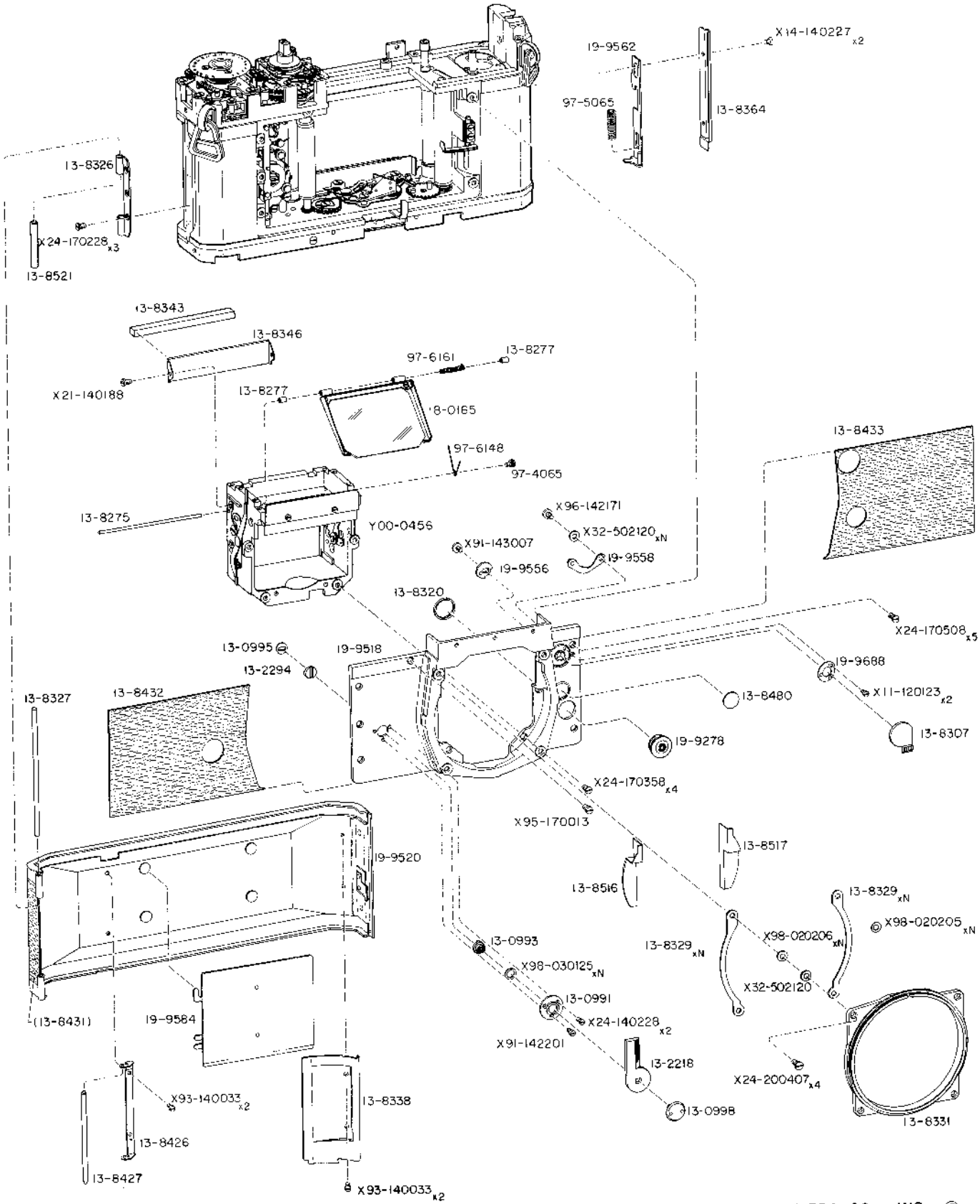

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PARTS LIST

BACK COVER

13-8326	Hinge
13-8327	Shaft of Hinge
13-8338	Cassette Holder
13-8426	Roller Holder
13-8427	Anti-curl Roller
13-8521	Collar
19-9520	Back Cover (B.P.)
13-8431	Leather
19-9584	Pressure Plate (B.P.)
X24-170228	Screw × 3
X93-140033	Screw × 4

LOCK DEVICE

13-8364	Cover Plate
19-9562	Hook (B.P.)
97-5065	Coil Spring
X14-140227	Screw × 2

FRONT PANEL

13-8432	Leather
13-8433	Leather
13-8480	Cover
13-8516	Light Shield
13-8517	Light Shield
19-9518	Front Panel (B.P.)
X24-170358	Screw × 4
X24-170508	Screw × 5
X95-170013	Screw

FLASH TERMINAL

13-8320	Nut
19-9278	Flash Terminal (B.P.)

REFLECTOR CLAMP (cf. p. 5)

13-8307	Reflector Clamp Knob
19-9556	Cam (B.P.)
19-9558	Reflector Clamp Lever (B.P.)
19-9688	Click Spring (B.P.)
X11-120123	Screw × 2
X32-502120 X32-502121	Washer × N
X91-143007	Screw
X96-142171	Screw

REFLECTOR

13-8275	Reflector Shaft
13-8277	Collar × 2
13-8343	Light Shield
13-8346	Light Shield
18-0165	Reflector (Unit)
97-4065	Screw
97-6148	Spring
97-6161	Spring
X21-140188	Screw

SELF-TIMER (cf. p. 6)

13-0991	Self-timer Bearing
13-0993	Coupling Joint
13-0995	Spring Washer
13-0998	Pin Face Screw
13-2218	Self-timer Lever
13-2294	Coupling Joint
X24-140228	Screw × 2
X91-142201	Screw
X98-030125	Washer × N

LENS MOUNTING FLANGE

13-8329(0.05) 13-8329(0.1) 13-8329(0.2)	Adjusting Washer × N Such numbers (0.05), (0.1) and (0.2) indicate thickness of Adjusting Washers. (unit: mm)
13-8331	Lens Mounting Flange
X24-200407	Screw × 4
X32-502120 X32-502121 X32-502122	Washer × N
X98-020205 X98-020206	Washer × N

REFLECTOR HOUSING (cf. p. 5)

Y00-0456	Reflector Housing (Unit)

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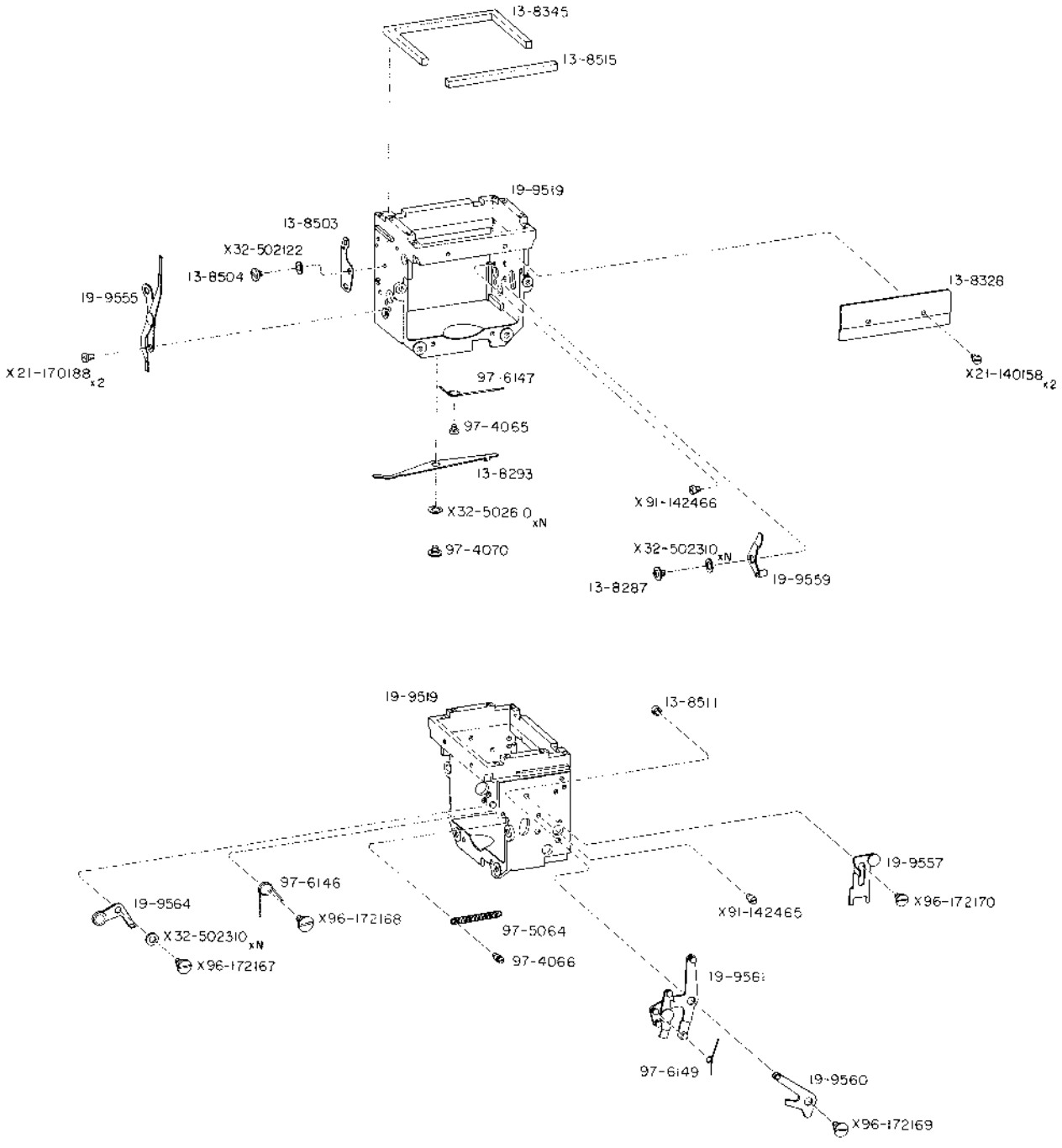
EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

REFLECTOR HOUSING (cf. p. 4)

13-8287	Screw
13-8293	Connecting Lever
13-8328	Light Shield
13-8345	Light Shield
13-8503	Reflector Adjusting Lever
13-8504	Screw
13-8511	Nut
13-8515	Light Shield
19-9519	Reflector Housing (B.P.)
19-9557	Slide Plate
19-9559	Swing-up Lever (B.P.)
19-9560	Swing-down Lever (B.P.)
19-9561	Inter Locking Lever (B.P.)
19-9564	Reflector Stopper (B.P.)
97-4065	Screw
97-4066	Screw
97-4070	Screw
97-5064	Coil Spring
97-6146	Spring
97-6147	Spring
97-6149	Spring
X21-140158	Screw × 2
X21-170188	Screw × 2
X32-502122	Washer
[X32-502310 X32-502311 X32-502312]	Washer × N
X91-142465	Screw
X91-142466	Screw
X96-172167	Screw
X96-172168	Screw
X96-172169	Screw
X96-172170	Screw

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EXPLODED VIEW

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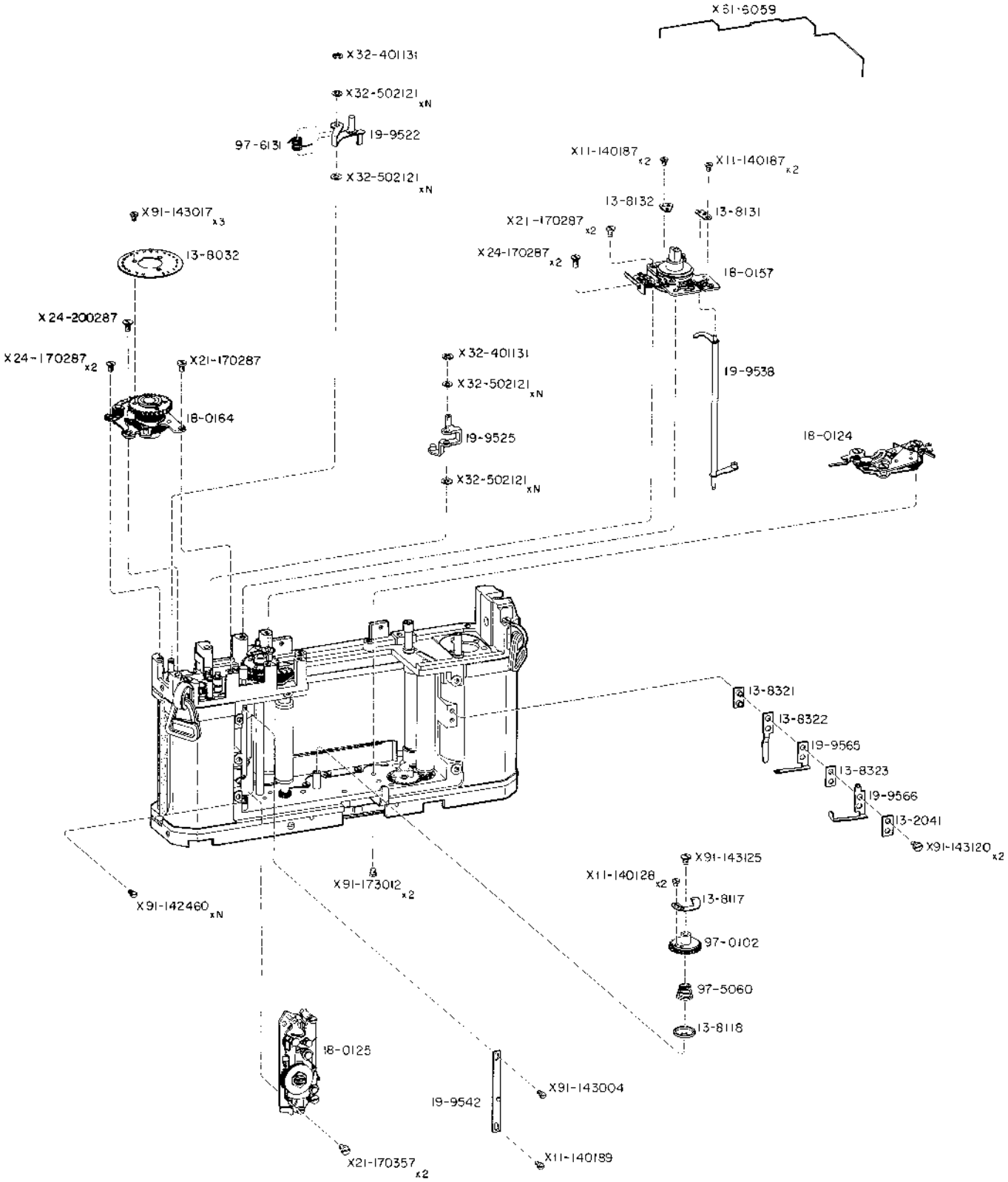
CANON CAMERA MODEL FX



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PARTS LIST

SHUTTER SPEED SELECTOR (cf. p. 7)

13-8131	Slow Shutter Link Holder
13-8132	Anchor Release Link Holder
18-0157	Shutter Speed Selector (Unit)
19-9538	Slow Shutter Link (B.P.)
X11-140187	Screw × 4
X21-170287	Screw × 2
X24-170287	Screw × 2

FILM COUNTER (cf. p. 7)

13-8032	Film Counter Dial
18-0164	Film Counter (Unit)
19-9522	Counter Reset Lever (B.P.)
19-9525	Counter Connect Lever (B.P.)
97-6131	Spring
X21-170287	Screw
X24-170287	Screw
X24-200287	Screw × 2
X32-401131	Retaining Washer × 2
X32-502121 X32-502122	Washer × N

SLOW SHUTTER GOVERNOR

18-0124	Slow Shutter Governor (Unit)
X91-173012	Screw × 2

SELF-TIMER (cf. p. 4)

18-0125	Self-timer (Unit)
19-9542	Self-timer Starter (B.P.)
X11-140189	Screw
X21-170357	Screw
X91-142460 X91-143461 X91-143462	Adjusting Screw × N
X91-143004	Screw

FLASH CIRCUIT (cf. p. 7)

13-2041	Insulator
13-8321	Insulator
13-8322	Contact
13-8323	Insulator
19-9565	FP Contact (B.P.)
19-9566	FP Contact (B.P.)
X61-6059	Lead Wire
X91-143120	Screw × 2

SHUTTER MECHANISM (cf. p. 11)

13-8117	Slow Shutter Pawl
13-8118	Spring Cover
97-0102	Slow Shutter Gear
97-5060	Screw × 2
X11-140128	Screw × 2
X91-143125	Screw

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EXPLODED VIEW

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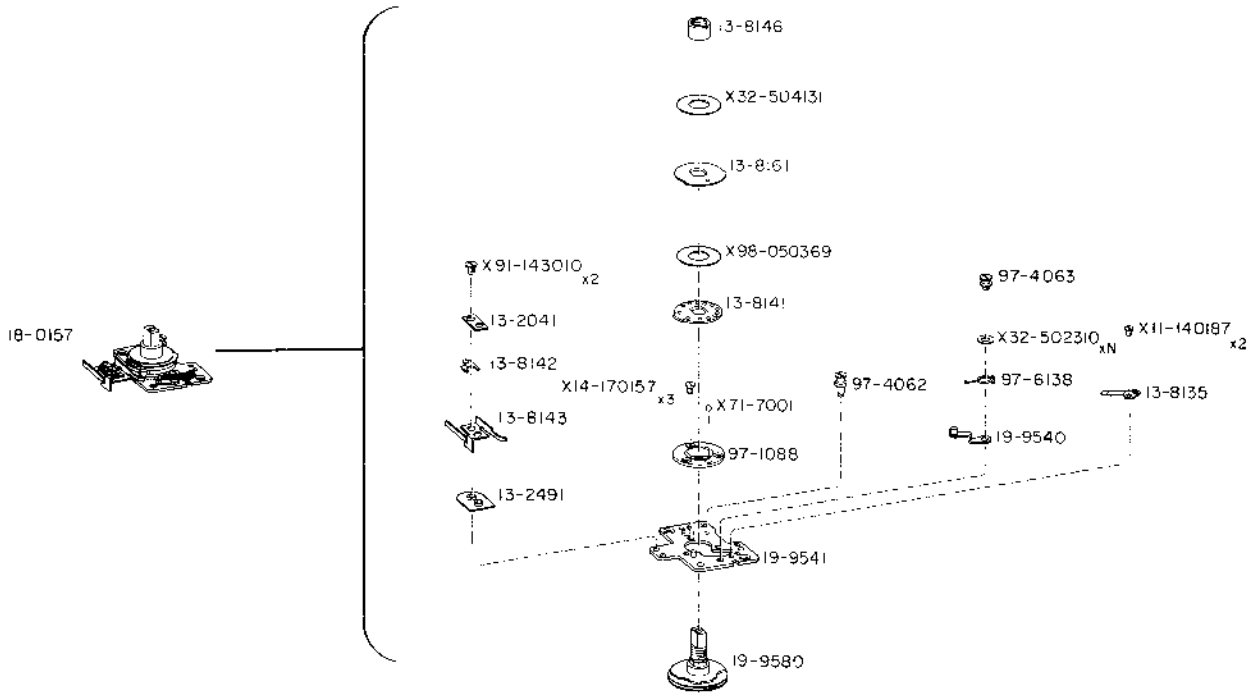
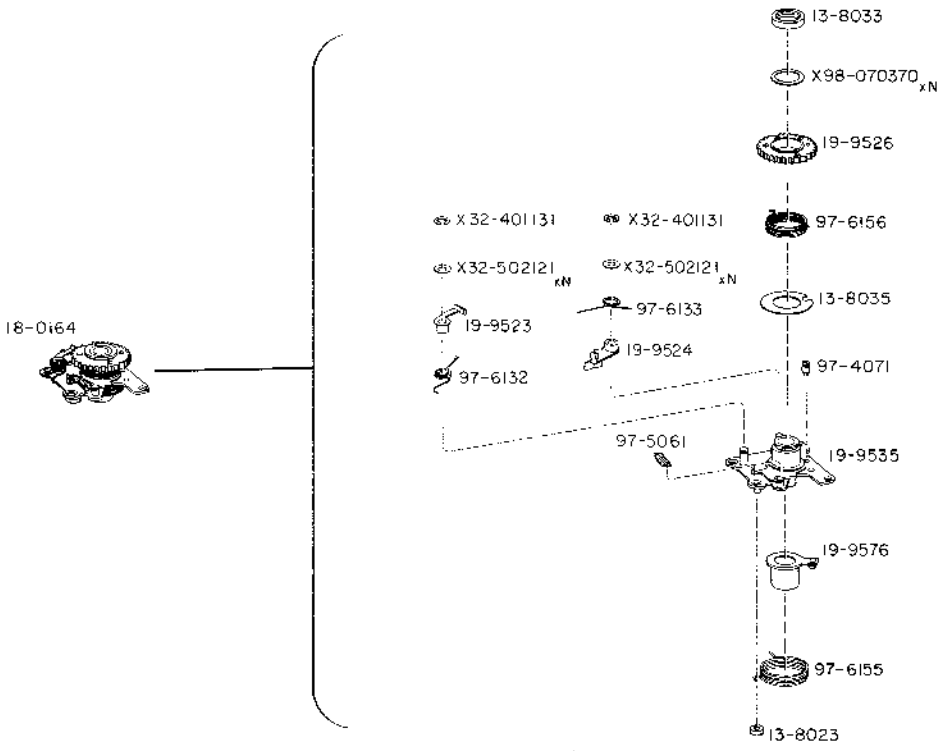
CANON CAMERA MODEL FX





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PARTS LIST

SHUTTER SPEED SELECTOR (cf. p. 6)

18-0157		Shutter Speed Selector (Unit)
	13-8135	Click Spring
	13-8141	Click Desk
	13-8146	Nut
	13-8161	Flash Cam
	19-9540	Flash Switch Lever (B.P.)
	19-9541	Shutter Speed Selector Base(B.P.)
	19-9580	Shutter Speed Cam
	97-1088	Bearing
	97-4062	Screw
	97-4063	Screw
	97-6138	Spring
	X11-140187	Screw×2
	X14-170157	Screw×3
	X32-502310 X32-502311 X32-502312	Washer×N
	X32-504131	Washer
	X71-7001	Steel Ball
	X98-050369	Washer

FLASH CIRCUIT (cf. p. 6)

13-2041	Insulator
13-2491	Insulator
13-8142	Lug
13-8143	X Contact
X91-143010	Screw×2

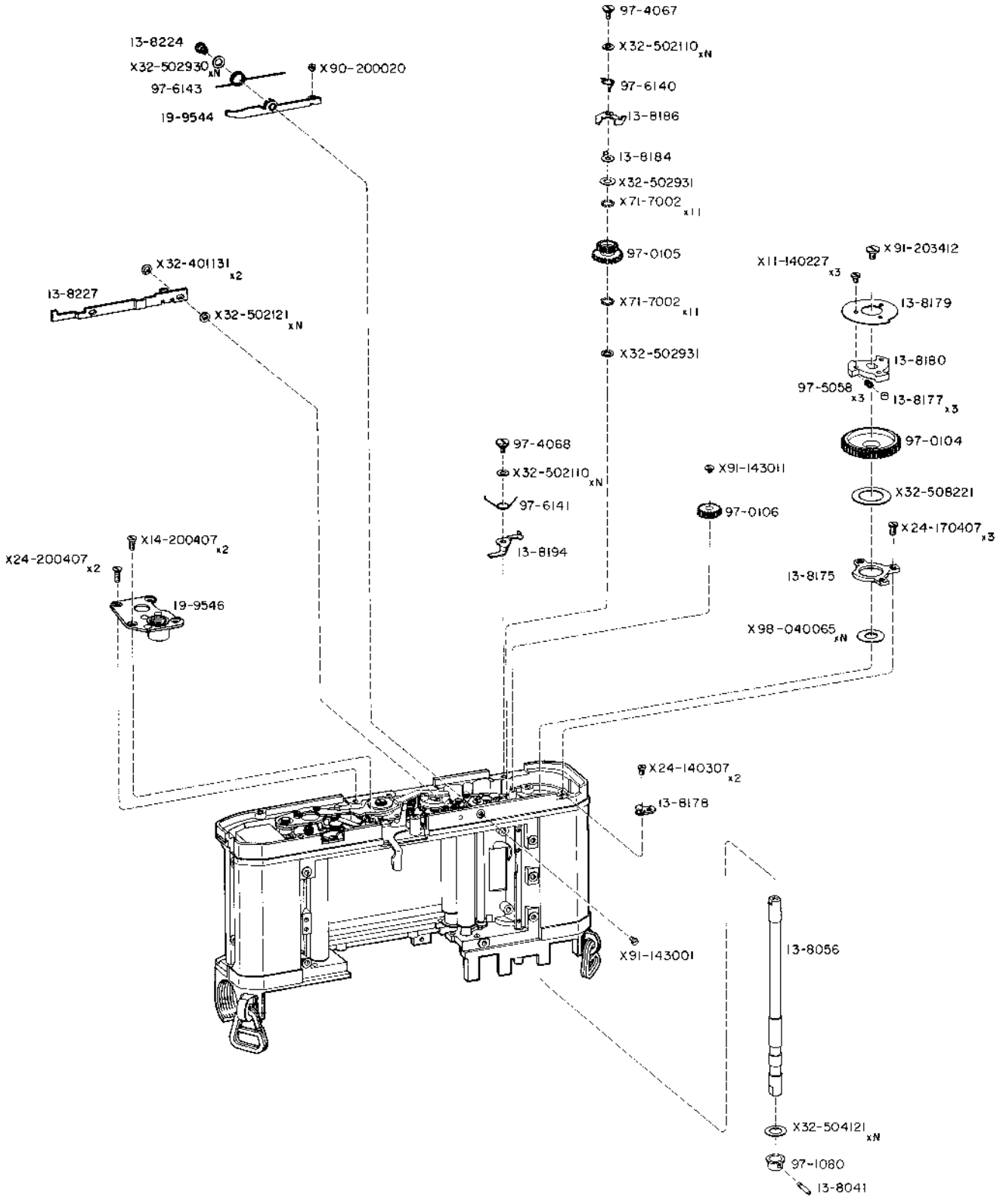
FILM COUNTER (cf. p. 6)

18-0164		Film Counter (Unit)
	13-8023	Nut
	13-8033	Nut
	13-8035	Washer
	19-9523	Stopper Claw (B.P.)
	19-9524	Feeding Claw (B.P.)
	19-9526	Counter Gear (B.P.)
	19-9535	Film Counter Base (B.P.)
	19-9576	Collar (B.P.)
	97-4071	Screw
	97-5061	Coil Spring
	97-6132	Spring
	97-6133	Spring
	97-6155	Spring
	97-6156	Spring
	X32-401131	Retaining Washer
	X32-502121 X32-502122	Washer×N
	X98-070370 X98-070371 X98-070372	Washer×N

EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

WINDING MECHANISM (cf. p. 1)

13-8041	Screw
13-8056	Winding Shaft
13-8175	Winding Gear Bearing
13-8177	Roller × 3
13-8178	Stopper
13-8179	Cover Plate
13-8180	Free Wheel Cam
97-0104	Winding Gear
97-1080	Winding Collar
97-5058	Coil Spring × 3
X11-140227	Screw × 3
X24-140307	Screw × 2
X24-170407	Screw × 3
[X32-504121 X32-504122]	Washer × N
X32-508221	Washer
X91-203412	Screw
[X98-040065 X98-040066]	Washer × N

REWIND CLAMP LEVER

13-8194	Rewind Clamp Lever
97-4068	Screw
97-6141	Spring
X32-502110	Washer × N

IDLE GEAR (cf. p. 12)

13-8184	Spring Hanger
13-8186	Clutch Release Lever
97-0105	Step Gear
97-0106	Idle Gear
97-4067	Screw
97-6140	Spring
[X32-502110 X32-502111]	Washer × N
X32-502931	Washer
X71-7002	Steel Ball × 22
X91-143011	Screw

REFLECTOR RELEASE LEVER (cf. p. 9)

13-8224	Release Lever Shaft
13-8227	Release Rod
19-9544	Release Lever (B.P.)
97-6143	Spring
X32-401131	Retaining Washer × 2
[X32-502121 X32-502122]	Washer × N
[X32-502930 X32-502931 X32-502932]	Washer × N
X90-200020	Screw
X91-143001	Screw

TRIPOD SOCKET

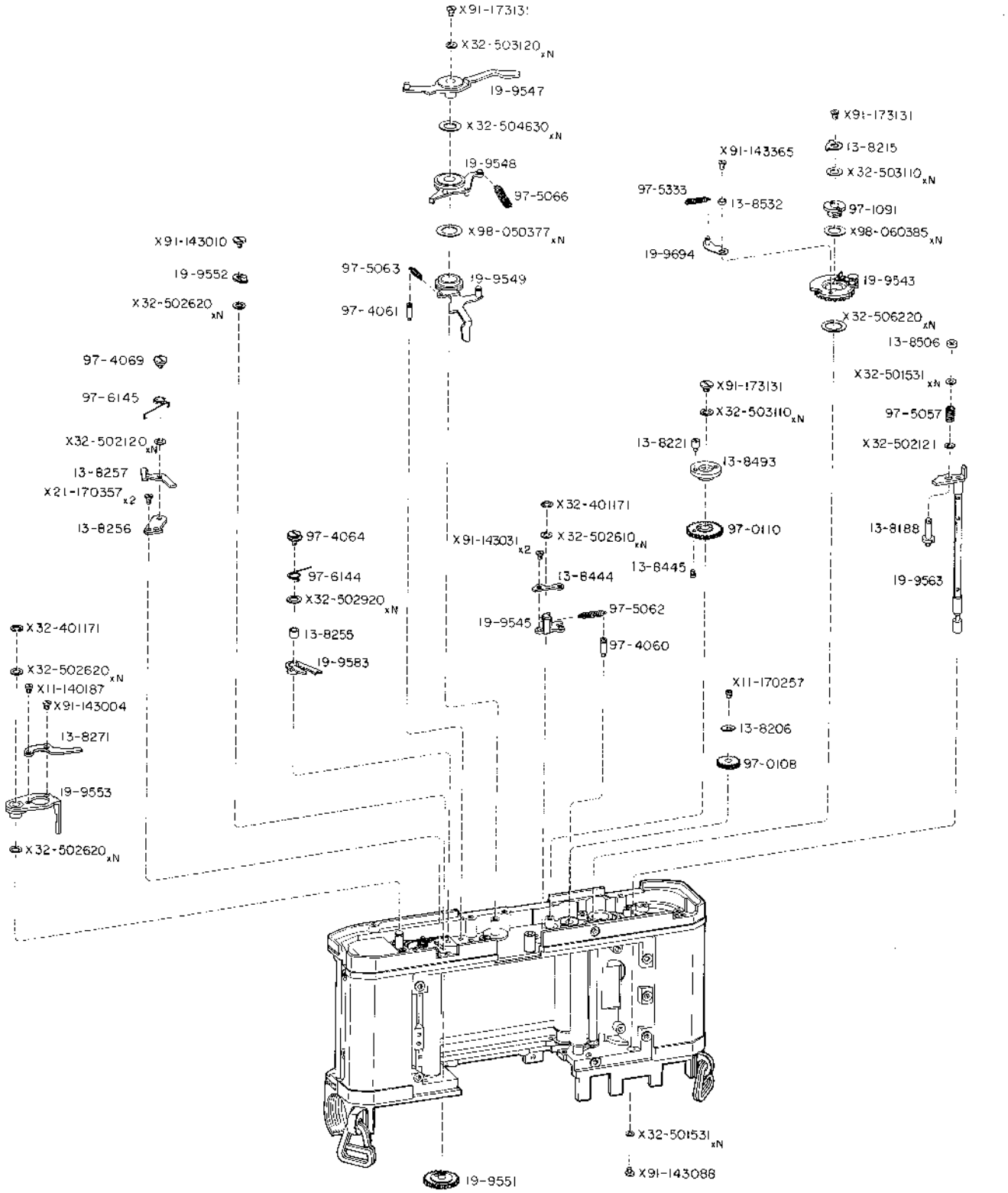
19-9546	Tripod Socket (B.P.)
X14-200407	Screw × 2
X24-200407	Screw × 2

REF. NO. 1-20301

EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

SHUTTER RELEASE SAFTY DEVICE

13-8215	Shutter Charge Pawl
13-8532	Collar
19-9543	Shutter Charge Gear (B.P.)
19-9694	Brake Lever (B.P.)
97-1091	Assemble Collar
97-5333	Coil Spring
X32-503110 X32-503111 X32-503112 X32-503113	Washer × N
X32-506220 X32-506221	Washer × N
X91-143365	Screw
X91-173131	Screw
X98-060385 X98-060386	Washer × N

REFLECTOR CHARGE MECHANISM (cf. p. 5)

13-8221	Screw
13-8255	Collar
13-8256	Reflector Clamp Lever Base
13-8257	Reflector Clamp Lever
13-8271	Reflector Charge Lever
13-8445	Screw
13-8493	Reflector Charge Disk
19-9547	Reflector Charge Lever (B.P.)
19-9551	Reflector Reset Gear (B.P.)
19-9553	Reflector Charge Lever (B.P.)
19-9583	Hook Lever (B.P.)
97-0110	Reflector Charge Gear
97-4064	Screw
97-4069	Screw
97-6144	Spring
97-6145	Spring
X11-140187	Screw
X21-170357	Screw × 2
X32-401171	Retaining Washer
X32-502120 X32-502121	Washer × N
X32-502620 X32-502621	Washer × N
X32-503110 X32-503111 X32-503112	Washer × N
X32-503120 X32-503121	Washer × N
X32-504630 X32-504631	Washer × N
X91-173131	Screw × 2

SHUTTER BUTTON (cf. p. 1)

13-8188	Shutter Shaft Guide
13-8506	Nut
19-9563	Shutter Button Guide (B.P.)
97-5057	Coil Spring
X32-501531 X32-501532	Washer × N
X32-502121	Washer
X91-143011	Screw

DIAPHRAGM OPERATION MECHANISM

13-8444	Diaphragm Clamp Lever
19-9545	Diaphragm Release Lever (B.P.)
19-9548	Diaphragm Reset Lever (B.P.)
19-9549	Diaphragm Release Lever (B.P.)
19-9552	Diaphragm Reset Lever (B.P.)
19-4060	Screw
97-4061	Screw
97-5062	Coil Spring
97-5063	Coil Spring
97-5066	Coil Spring
X32-401171	Retaining Washer
X32-502610 X32-502611 X32-502612	Washer × N
X32-502620 X32-502621	Washer × N
X32-503120 X32-503121	Washer × N
X32-504630 X32-504631	Washer × N
X91-143010	Screw
X91-143031	Screw × 2
X91-173131	Screw
X98-050377 X98-050278	Washer × N

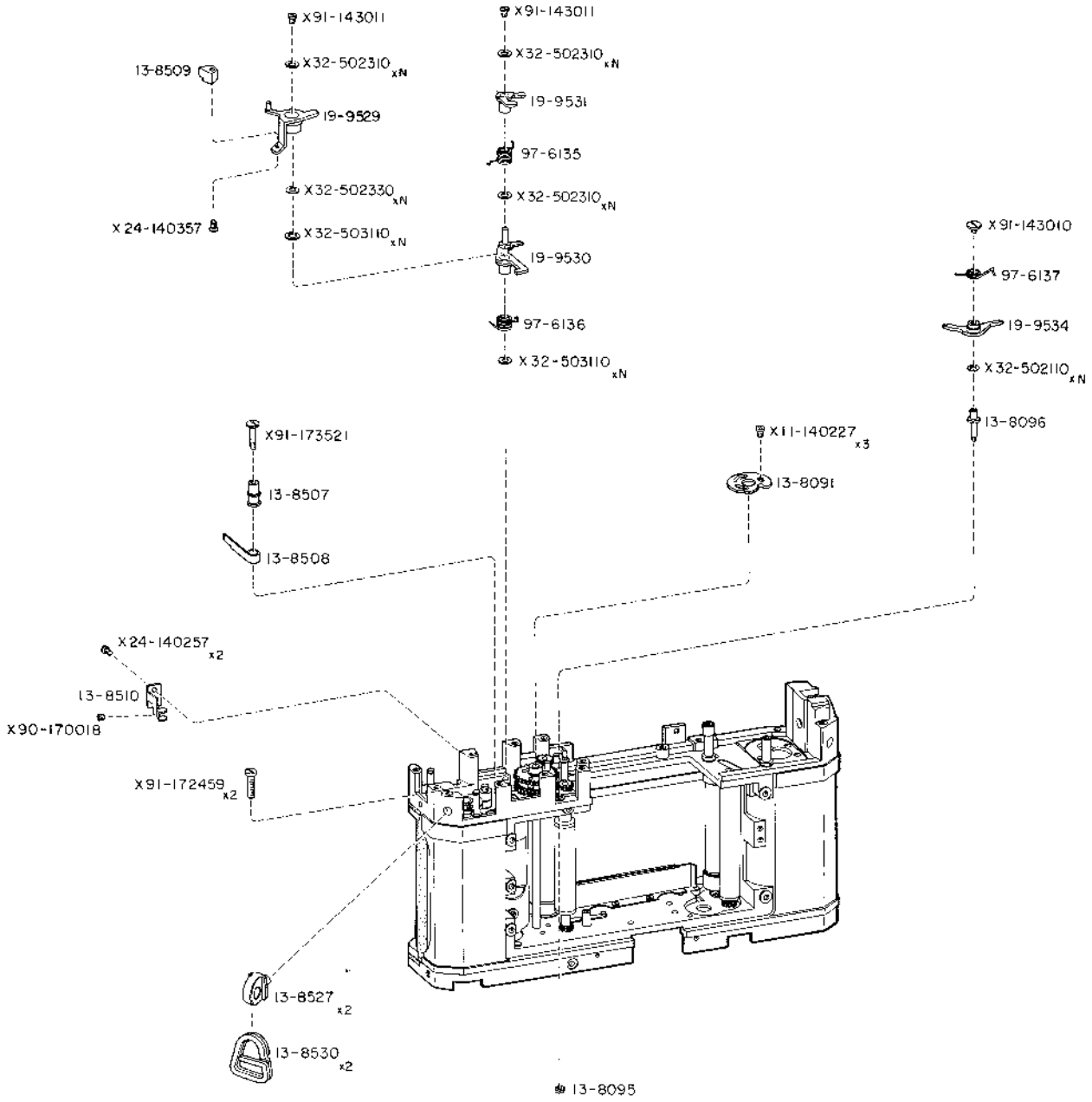
IDLE GEAR (cf. p. 8)

13-8206	Idle Gear Holder
97-0108	Idle Gear
X11-170257	Screw

EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

SHUTTER MECHANISM

13-8091	Release Cam
13-8095	Nut
13-8096	Release Lever Shaft
13-8507	1st Curtain Brake Shaft
13-8508	Brake Band
13-8509	1st Curtain Brake Head
13-8510	Brake Band Holder
19-9529	1st Curtain Brake (B.P.)
19-9530	2nd Curtain Release Lever (B.P.)
19-9531	2nd Curtain Release Lever (B.P.)
19-9534	Shutter Release Lever (B.P.)
97-6135	Spring
97-6136	Spring
97-6137	Spring
X11-140227	Screw × 3
X24-140257	Screw × 2
X24-140357	Screw
X32-502110 X32-502111	Washer × N
X32-502310 X32-502311	Washer × N
X32-502330 X32-502331 X32-502332	Washer × N
X32-503110 X32-503111 X32-503112	Washer × N
X90-170018	Screw
X91-143010	Screw
X91-143011	Screw
X91-173521	Screw

NECK STRAP ADAPTER

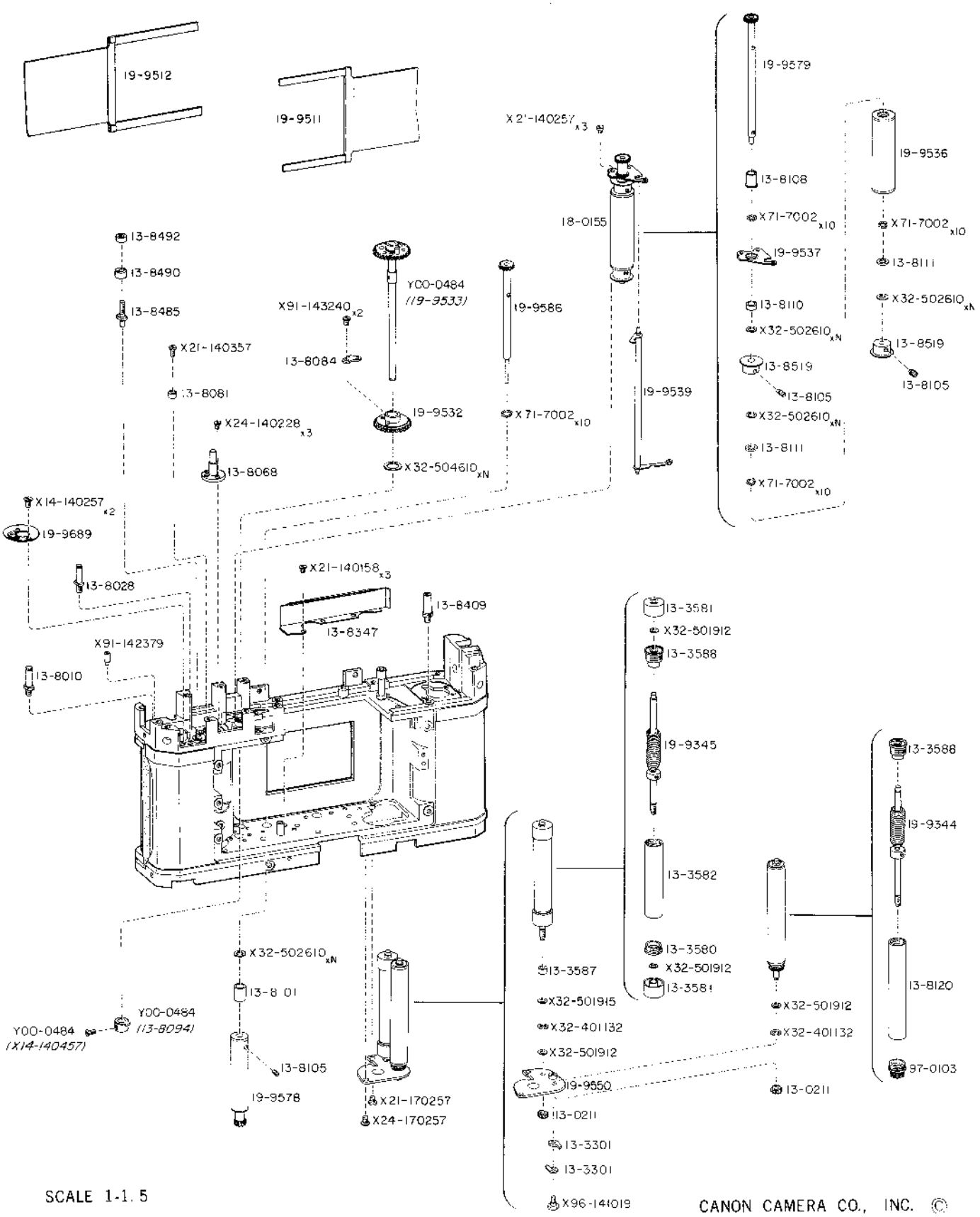
13-8527	Neck Strap Catch × 2
13-8530	Neck Strap Adapter × 2
X91-172459	Screw × 2

REF. NO. 1-20301

EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

SHUTTER MECHANISM (cf. p. 10)

Y00-0484	1st Curtain Gear (Unit)

n.b. Y00-0844 is consited of three parts, i.e., 13-8094, 19-9533, and X14-140457 as an unit, and we don't supply them separately to you from the point of its ability.

13-0211	Ratchet Nut×2
13-3301	Claw×2
13-3580	Flange
13-3581	Roller
13-3582	1st Curtain Drum
13-3587	Collar
13-3588	Nut
13-8068	Brake Shaft
13-8081	Eccentric Ring
13-8084	Hook
13-8101	Collar
13-8105	Screw×3
13-8108	Collar
13-8110	Collar
13-8111	Washer×2
13-8120	2nd Curtain Spring Drum
13-8347	Light Shield
13-8409	Meter Supporter
13-8485	Stopper
13-8490	Eccentric Ring
13-8492	Nut
13-8519	Flange×2
18-0155	1st Curtain Drum (Unit)
19-9344	2nd Curtain Spring (B.P.)
19-9345	1st Curtain Spring (B.P.)
19-9511	1st Curtain (B.P.)
19-9512	2nd Curtain (B.P.)
19-9532	2nd Curtain Gear (B.P.)
19-9536	1st Curtain Drum (B.P.)
19-9537	1st Curtain Drum Base (B.P.)
19-9539	Anchor Release Link (B.P.)
19-9550	Shutter Spring Base (B.P.)
19-9778	2nd Curtain Drum (B.P.)
19-9579	1st Curtain Drum Shaft (B.P.)
19-9586	2nd Curtain Drum Shaft (B.P.)
97-0103	2nd Curtain Spring Gear
X21-140158	Screw×3
X21-140257	Screw×3
X21-140357	Screw
X21-170257	Screw
X24-140228	Screw×3
X24-170257	Screw
X32-401132	Retaining Washer×2
X32-501912	Washer
X32-501915	Washer
[X32-502610 X32-502611]	Washer×N
[X32-504610 X32-504611 X32-504612]	Washer×N
X71-7001	Steel Ball×40
X91-143240	Screw×2
X96-141019	Screw

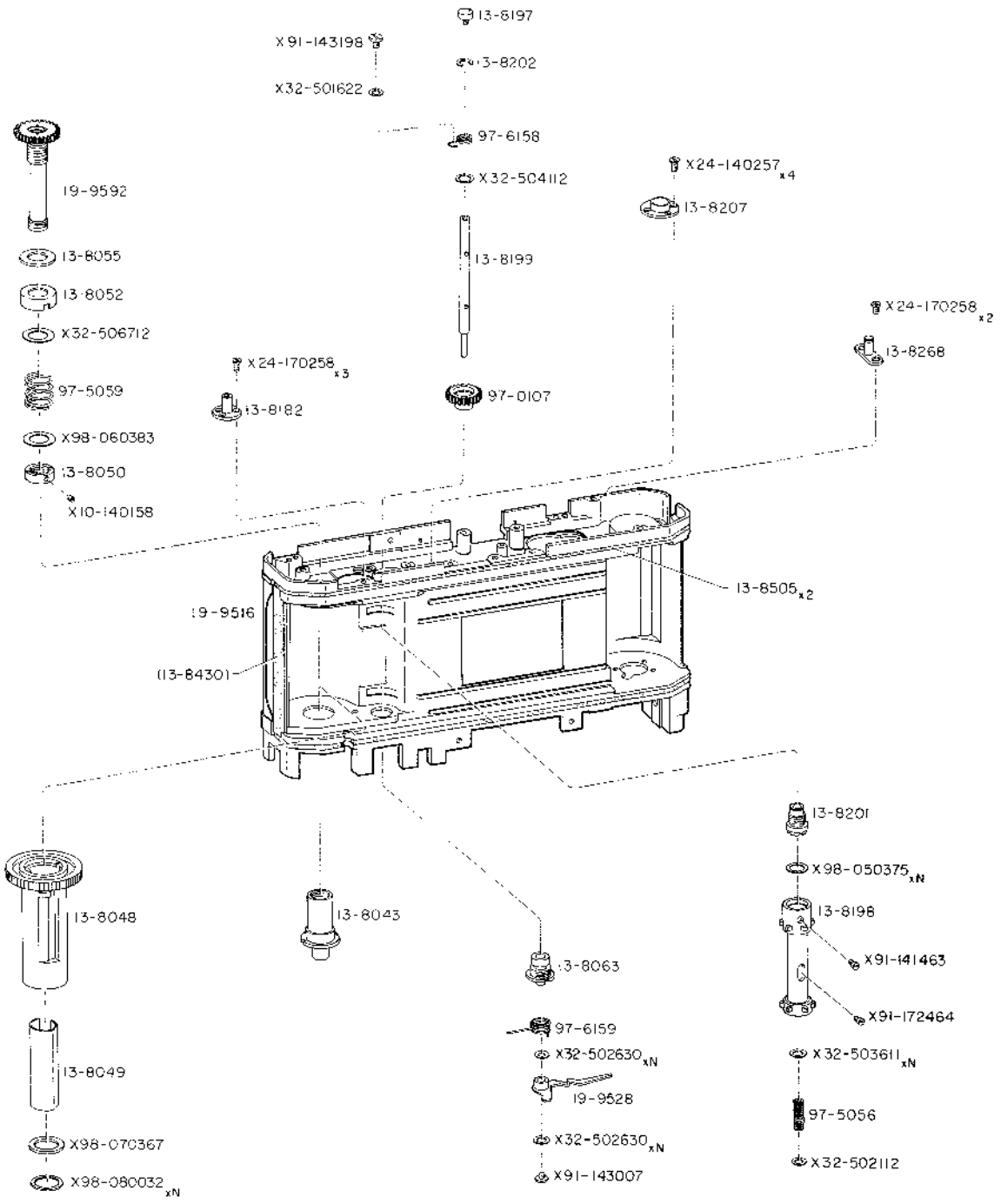
FILM COUNTER (cf. pp. 6 & 7)

13-8010	Reset Lever Shaft
13-8028	Connect Lever Shaft
19-9689	Counter Cam (B.P.)
X14-140257	Screw×2
X91-142379	Screw

EXPLODED VIEW

of

CANON CAMERA MODEL FX



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PARTS LIST

TAKE-UP SPOOL (cf. p. 8)

13-8043	Spool Shaft
13-8048	Take-up Spool
13-8049	Spool Spring
13-8050	Nut
13-8052	Spring Cover
13-8055(0.6)	Fiber Washer
13-8055(0.8)	Such numbers(0.6), (0.8) and(1) indicate thickness of Fiber Washers.
13-8055(1)	(unit:mm)
19-9592	Take-up Spool Gear (B.P.)
97-5059	Spring
X10-140158	Screw
X32-506712	Washer
X98-060383	Washer
X98-070367	Washer
X98-080032	Washer × N
X98-080033	

SPROCKET

13-8063	Sprocket Bearing
13-8197	Rewind Button
13-8198	Sprocket
13-8199	Sprocket Shaft
13-8201	Sprocket Clutch
13-8202	Retainer
19-9528	2nd Curtain Brake (B.P.)
97-0107	Sprocket Gear
97-5056	Coil Spring
97-6158	Spring
97-6159	Spring
X32-501622	Washer
X32-502112	Washer
X32-502630	Washer × N
X32-502631	
X32-503611	Washer × N
X32-503612	
X32-504112	Washer
X91-141463	Screw
X91-143007	Screw
X91-143198	Screw
X91-172464	Screw
X98-050375	Washer × N
X98-050376	

BODY CASE (cf. pp. 8 & 9)

13-8505	Light Shield×2
13-8182	Idle Gear Shaft
13-8207	Winding Gear Bearing
13-8268	Reflector Charge Lever Shaft
19-9516	Body Case
13-8430	Light Shield
X24-170257	Screw×4
X24-170258	Screw×5

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X98-050378	9
X98-060383	12
X98-060385	9
X98-060386	9
X98-070367	12
X98-070370	7
X98-070371	7
X98-070372	1,7
X98-070373	1
X98-070374	1
X98-080032	12
X98-080033	12

CANON REPAIR GUIDE

CANON CAMERA MODEL FX

(REFERENCE NO. 1-20301)

CANON CAMERA COMPANY, INC.

TOKYO, JAPAN

PREFACE

Canon FX is a product of Canon's proud quality control system. As a result of wide market research, traditionally high technical skills and rigid inspection before delivery, Canon's FX is enjoying full confidence of its buyers as a high quality easy to handle sigle lens reflex camera.

Because of the above-mentioned manufacturing system, FX is almost breakdown-proof. As long as the instructions given in the instruction booklet are carefully followed, this camera can be maintained in top functioning condition.

If by chance, however, something should go wrong, repair the trouble completely according to the technical instructions given in the following pages. Canon Camera Co., Inc. is prepared to supply sufficient parts and tools for performing these repairs.

For details as to ordering of parts and tools, please send your inquiries to,

Canon Camera Co., Inc., SERVICE DEPARTMENT
312 Shimomarukocho, Ohtaku, Tokyo, Japan.

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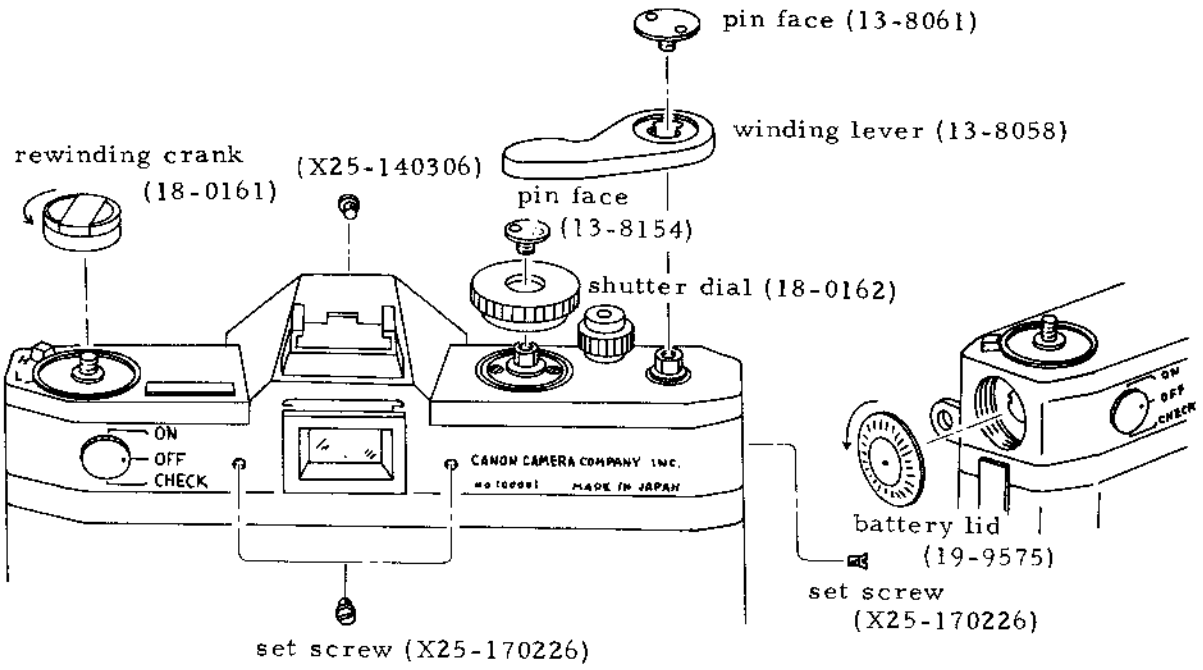
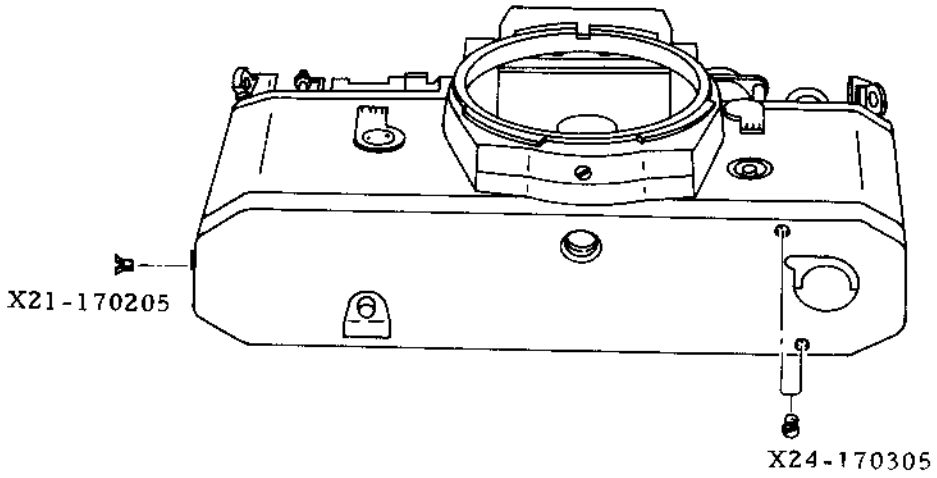
TOP COVER DISASSEMBLING



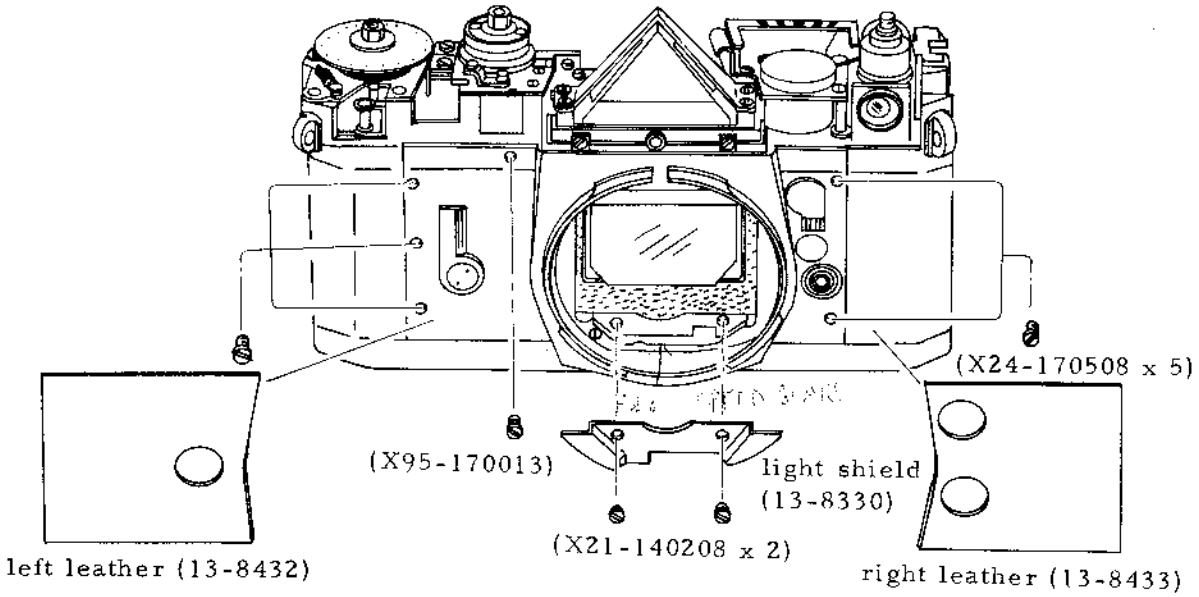
operations	process & n.b.
1. Take out winding lever.	Take out pin face. (13-8061) → Take out winding lever. (13-8058)
	n.b. 1. Take out ironware (13-8062, 13-8059, 13-8057) together with the lever, which is attached to the winding lever. 2. Don't lose washers for adjustment of hight.
2. Take out shutter dial.	Take out pin face. (13-8154) → Take out shutter dial. (18-0162)
	n.b. At the time taking out shutter dial, set ASA 800, shutter speed B.
3. Take out rewinding crank	Take out rewinding crank. (18-0161)
4. Take out battery lid.	Take out battery lid. (19-9575)
5. Take out every set screw of top cover.	Take out side set screw. (X25-170226) → Take out back set screw. x 2 (X25-170226)
	Take out front set screw. (X25-140306)
	At the time taking out top cover, set shutter lock lever at A.

BASE PLATE DISASSEMBLING



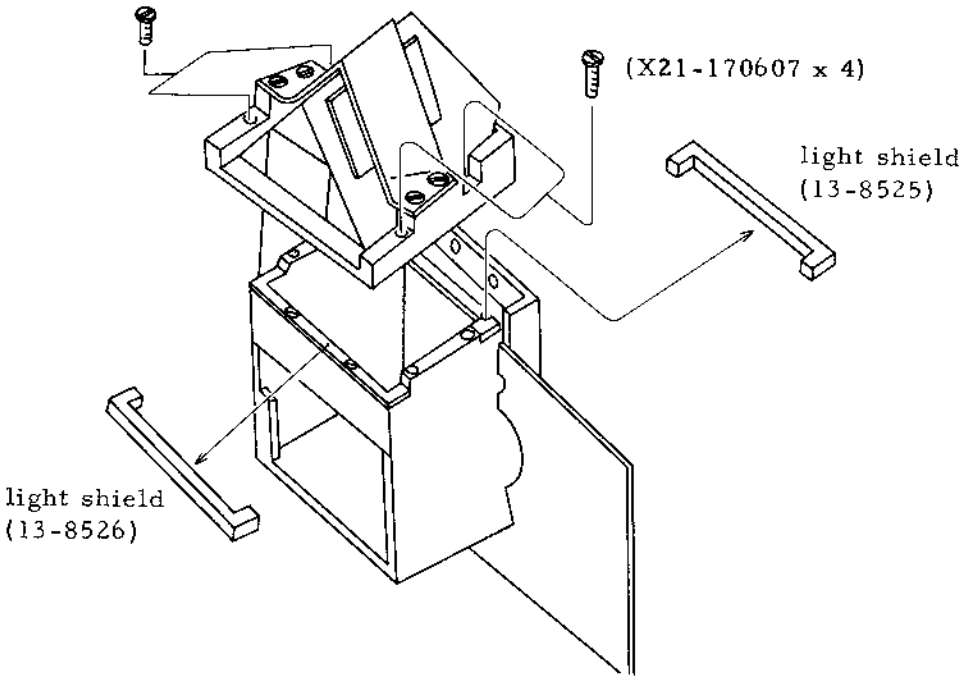
operations	process & n.b.	
1. Take out set screw for base plate	set screw x 2 (X24-170305)	side set screw (X21-170226)
2. Take out base plate		

FRONT PANEL DISASSEMBLING



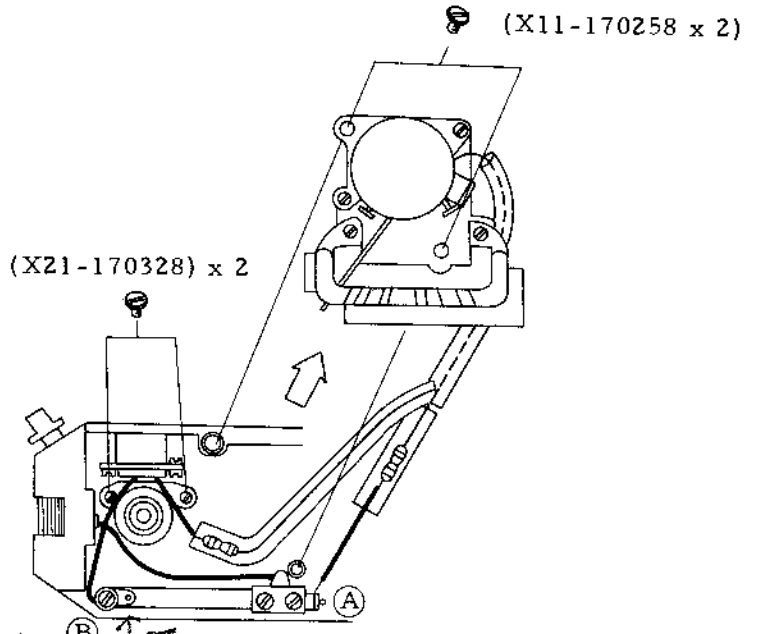
operations	process & n.b.	
1. Take out leather.	left leather (13-8432)	right leather (13-8433)
2. Take out light shield	set screw for light shield x 2 (X21-140208)	Take out light shield. (13-8330)
3. Take out every set screw for front panel.	set screw x 5 (X24-170508)	set screw (X95-170013)

PENTAPRISM BOX DISASSEMBLING



operations	process & n.b.
1. Take out set screw for pentaprism box.	Take out set screw x 4 (X21-170607)
2. Take out pentaprism box.	

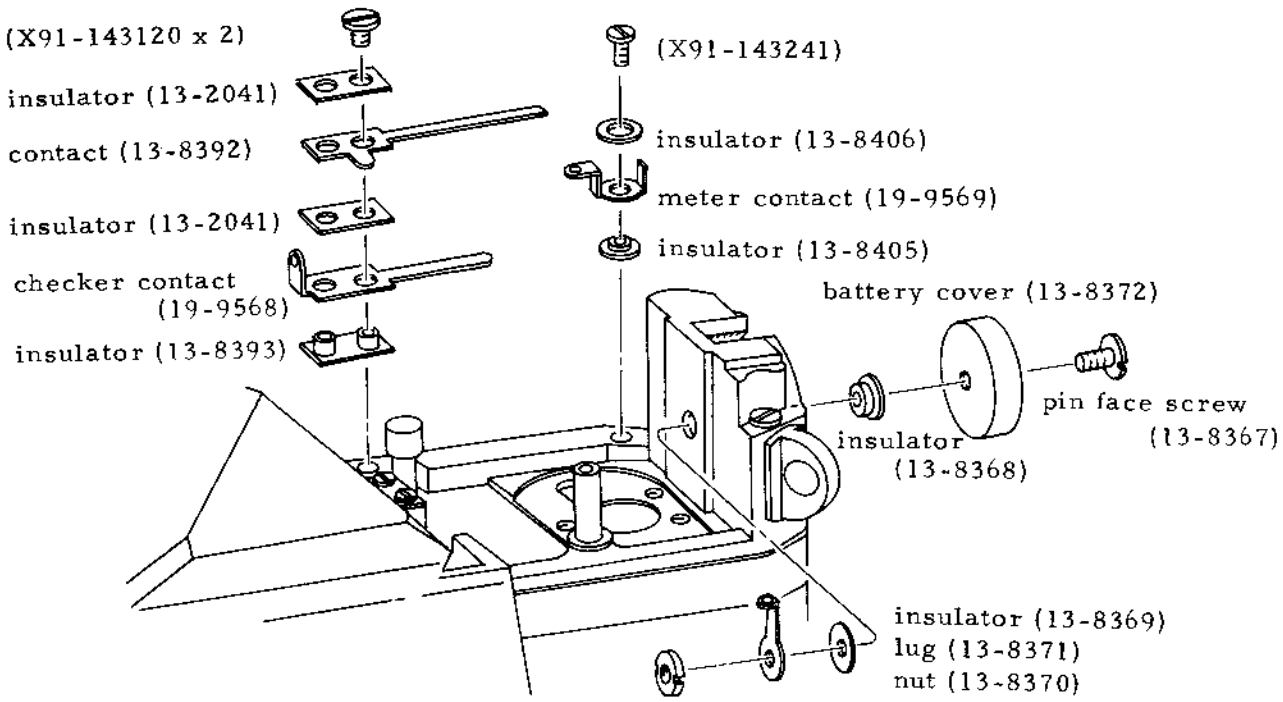
CdS METER DISASSEMBLING



IF METER CHECKER WORKS BUT METER DOESNIT CLEAN SWITCH UNDER TOP - INREAR

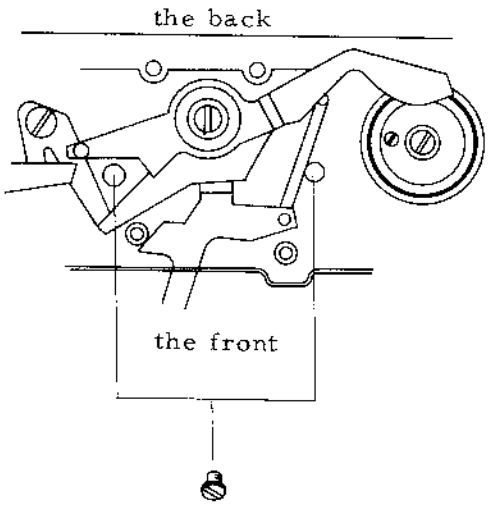
operations	process & n.b.	
1. Take out set screw for meter.	set screw for meter x 2 (X11-170258)	Take out meter. (18-0131)
	n.b. After taking out set screw for meter, pull the meter slowly to the direction of the arrow.	
2 Take out solder.	Take out solder A, B.	
3. Take out set screw for CdS.	set screw for CdS x 2 (X21-170328)	Take out CdS.

METER CONTACT DISASSEMBLING



operations	process & n.b.		
1. Take out meter contact.	set screw (X91-143241)	insulator (13-8406)	meter contact (19-9569)
	insulator (13-8405)		
2. Take out battery cover.	pin face screw (13-8367)	battery cover (13-8372)	insulator (13-8368)
	nut (13-8370)	lug (13-8371)	insulator (13-8369)
3. Take out contact and checker contact.	Take out set screw (X91-143120) x 2	insulator (13-2041)	contact (13-8392)
	insulator (13-2041)	checker contact (19-9568)	insulator (13-8393)

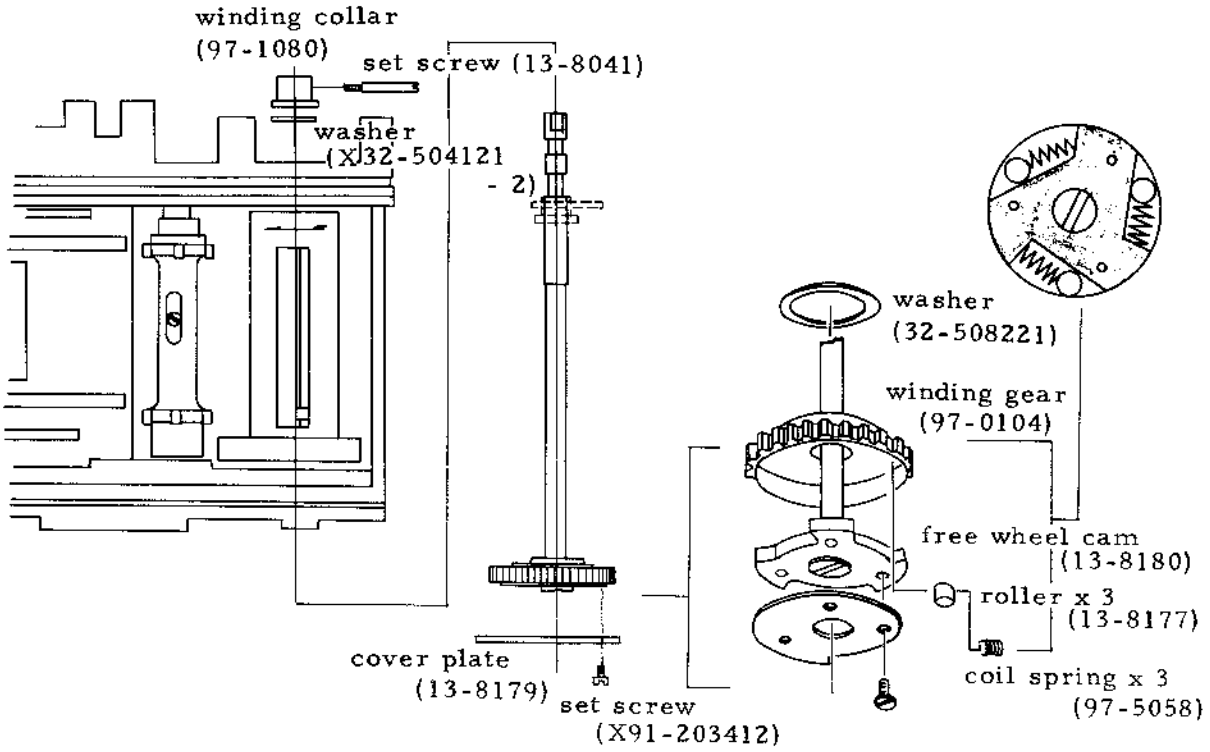
GOVERNOR DISASSEMBLING



(X91-17301012 x 2)

operations	process & n.b.
1. Take out set screw for governor.	Take out set screw. x 2 (X91-173012)
	n.b. The one of the set screws cannot be seen unless the winded condition is taken.
2. Take out governor.	Take out governor. (18-0124)

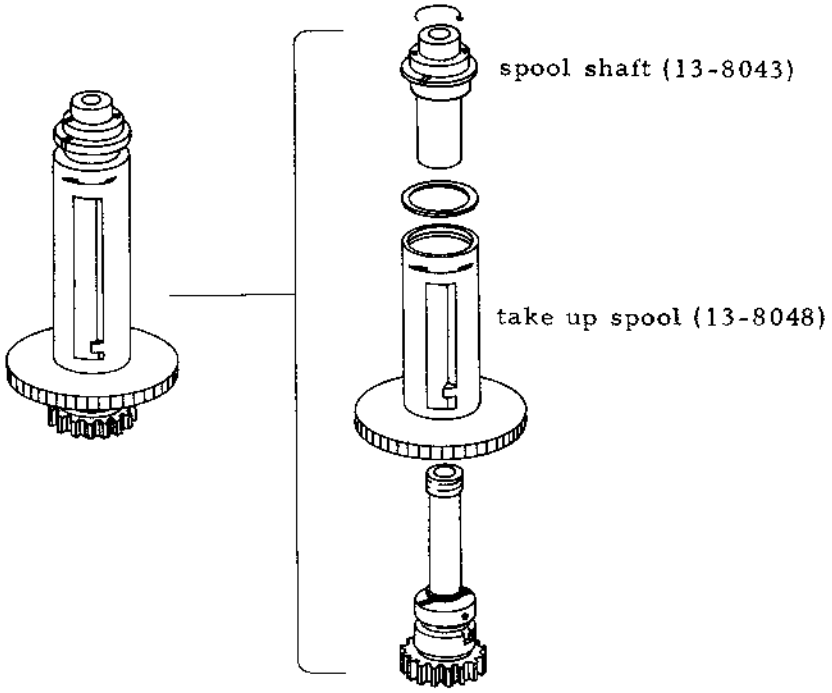
WINDING SHAFT DISASSEMBLING



operations	process & n.b.		
1. Take out winding shaft.	set screw (13-8041)	winding collar (97-1080)	washer (X32-504121-2)
	set screw x 3 (X91-203412)	cover plate (13-8179)	Pull out winding shaft.

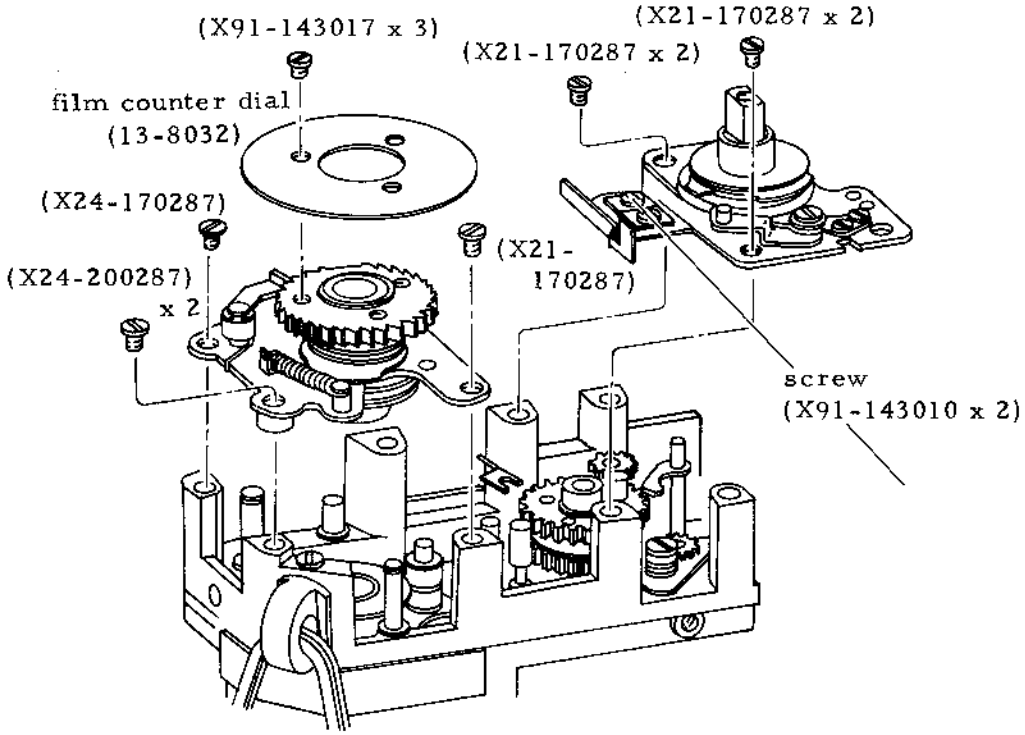
n.b. It can be taken out free wheel cam, roller, coil spring, and winding gear altogether, however, the spring is easy to jump and lose, so that it had better take out roller and coil spring when the cover plate is taken out.

TAKE-UP SPOOL DISASSEMBLING



operations	process & n.b.
1. Take out take up spool.	Fix our screw driver T06A-8043 into spool shaft (13-8043), turn to clockwise. n.b. Pay attention to the spool shaft is screwed counter clock thread.

FILM COUNTER & SHUTTER SPEED SELECTOR DISASSEMBLING



operations	process & n.b.		
1. Take out film counter.			
Take out every set screw.	set screw x 2 (X24-200287)	set screw x 2 (X24-170827)	set screw (X21-170287)
	Take out film counter.		
2. Take out shutter speed selector.			
Take out every set screw.	set screw x 2 (X24-17287)	set screw x 2 (X21-170287)	screw (X91-143010)
	Loose one. Take out piece.		
	Take out shutter speed selector. (18-0157)		

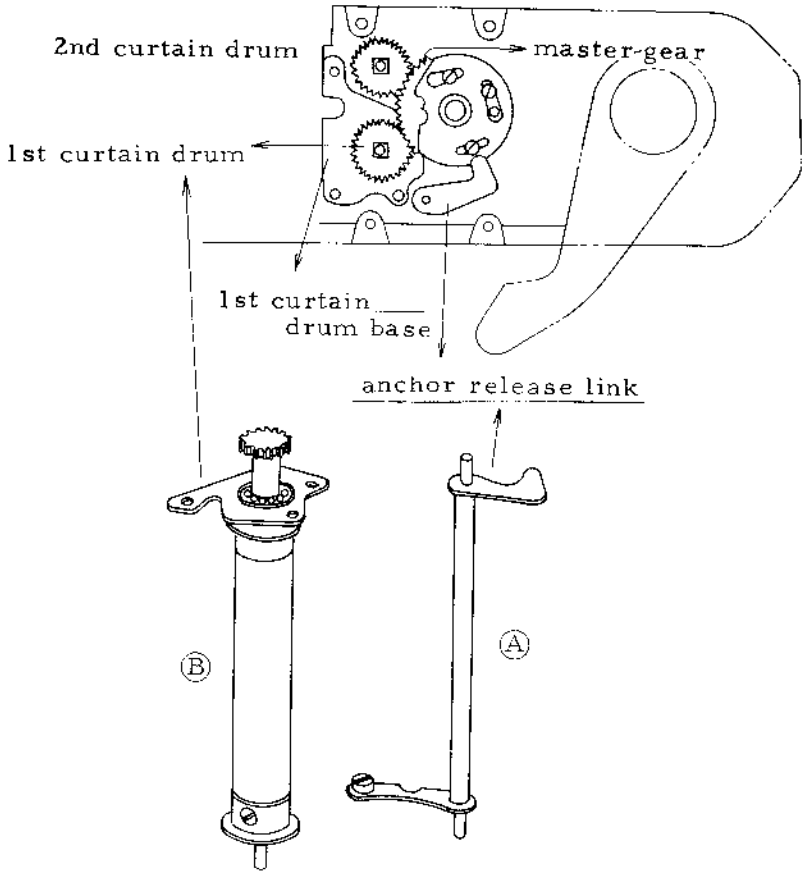
n.b. Detach meter scale from pulley before taking out shutter speed selector.

1ST CURTAIN DRUM ADJUSTMENT

operations	process & n.b.
1. How to fix slow shutter link.	It is not possible to detach or fix anchor release link if 1st curtain drum is being fixed to the body, and moreover, at the time anchor release link will be fixed, 1st curtain drum must be in the detached condition. (Refer to the following diagram.)

n.b. 1. At this time shutter speed selector is detached.

2. Place anchor release link in the body hole. (B part in the following diagram.)

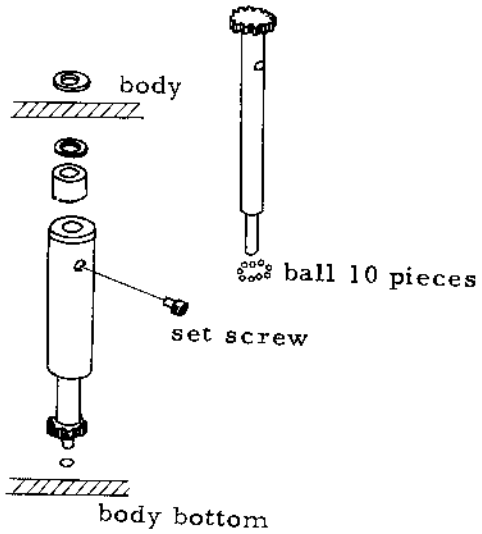


2. How to fix 1st curtain drum.	Place the end B of the 1st curtain drum into the hole of the body and put the base plate and the body together temporary, and fasten the master gear and 1st curtain drum gear pushing a little bit to the direction that the space between the gears comes apart.

n.b. Put diabond to screws. At this moment don't put it to bearings.

2ND CURTAIN DRUM ADJUSTMENT

operations	process & n.b.
1. How to fix 2nd curtain drum.	It is not possible to fix or to detach 2nd curtain drum if curtain is fixed on, and therefore, in the case of repair, only in the case of submergence, detach and fix the curtain. (Refer to the following diagram.)



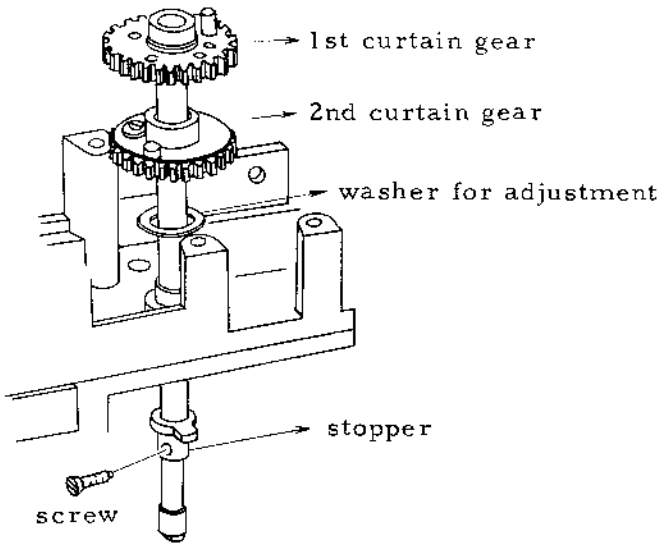
n.b. 1. Put in 10 balls. Lubricate GE-1.

2. Fasten set screw of the drum tightly.

3. Thrust loose must be approximately 0.1 - 0.2 mm.

MASTER GEAR ADJUSTMENT

operations	process & n.b.
1. How to fix master gear	1-1 Process for assembly (Refer to the following diagram.)



1-1-1 Put 2nd curtain gear to 1st curtain gear, then put washer for adjustment.

1-1-2 Let it through the body.

1-1-3 Put stopper in.

n.b. At the time inserting stopper and fastening screw, loose up and down of 2nd curtain gear must be within 0.1 mm.

2. How to adjust.

2-1 How to adjust gearing.

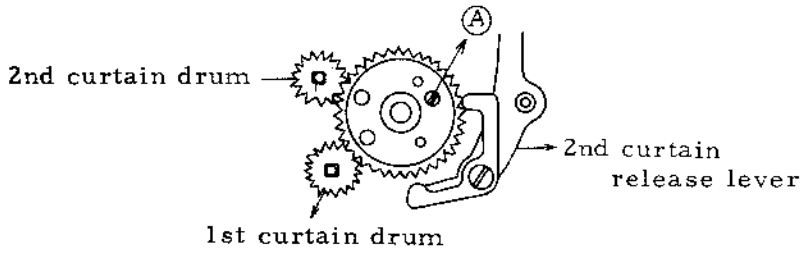
2-1-1 Wind 2nd curtain drum up to 2nd curtain line of the body with finger, and gear it to 2nd curtain release lever and hook.

2-1-2 At this time let 1st curtain gear shaft through and insert stopper as the process mentioned at 1-1 item.

2-1-3 In the condition of which shutter is released, make the position A of 1st curtain gear as it must come as shown in the following diagram.

operations

process & n.b.



2-1-4 Wind up master gear with pincette or screw-driver, inspect gearing of curtain.

2-1-5 Concerning adjustment of curtain gearing, press 1st curtain drum and 2nd curtain drum with your fingers as they should not return to the starting on the way of winding, and adjust it turning 1st curtain gear.

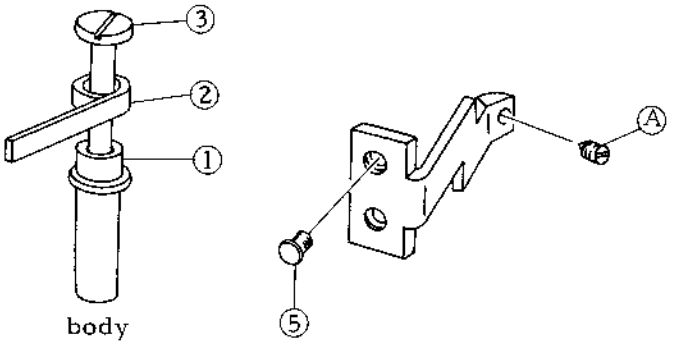
2-1-6 After adjustment of curtain gearing, set the stopper with screw.

n.b. When the stopper is set to the master gear shaft, fasten tightly from the side of bigger hole.

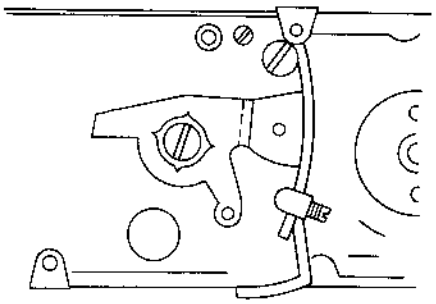
2-1-7 In the condition of winded up, fix shutter charge pawl placing its end to the direction of back cover.

1ST CURTAIN BRAKE ADJUSTMENT

operations	process & n.b.			
1. How to fix 1st curtain brake band	body	1 collar	2 band	3 screw



body front



2. How to adjust

1. How to adjust 1st curtain jump

1-2 Control the strength of 1st curtain brake within the limit of 150 - 200g, adjust it with screw A.

1-3 Concerning the adjustment of jump, it will be strong if screw A is turned to clockwise and become weak if it is turned to counter clock-wise.

1-4 After the adjustment, put diabond on screw A.

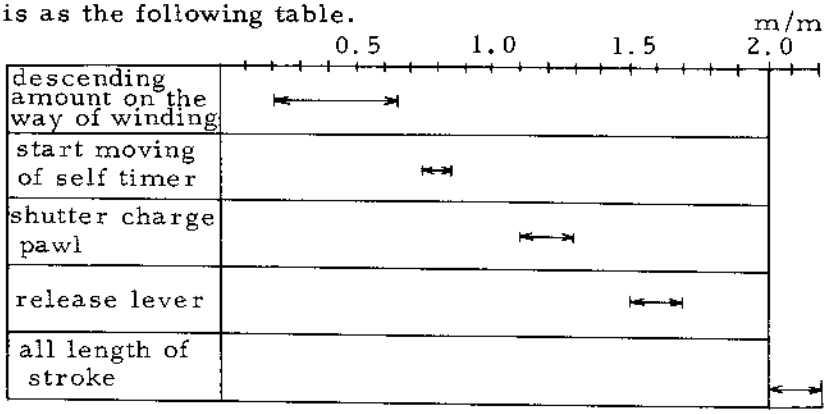
SHUTTER STROKE ADJUSTMENT

operations

process & n.b.

1. Adjustment of stroke

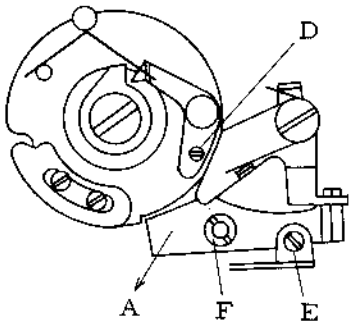
Operation of related mechanism stroking shutter button is as the following table.



How to adjust

1-1 How to adjust descending amount on the way of winding

On the way of winding the loose amount of shutter button must be adjusted within 0.2 - 0.65 mm, bending the portion A of the following diagram up and down for the adjustment of loose amount, and adjust it within the limit.



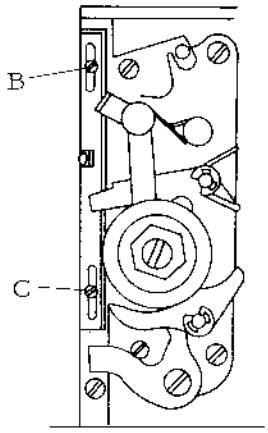
1-2 How to adjust the stroke until start moving selftimer

Self timer must start moving within the limit of 0.75 - 0.85 mm.

As the adjustment, shift the position up and down loosening screws B, C in the following diagram.

operations

process & n.b.



1-3 How to adjust position of coming off for shutter charge pawl.

It is required that coming off for shutter charge pawl must come off within the limit in stroke 1.1 - 1.3 mm.

Refer to the diagram of item 1-1 for the adjustment, turn eccentric dowel of D and change the gearing amount of forwarding claw and shaft claw.

1-4 How to adjust position of coming off for release lever.

It is required that coming off for release lever must come off within the limit in stroke 1.5 - 1.7 mm.

Refer to the diagram of item 1-1 for the adjustment, inspect the condition of coming off with potato screw E.

1-5 How to adjust all stroke.

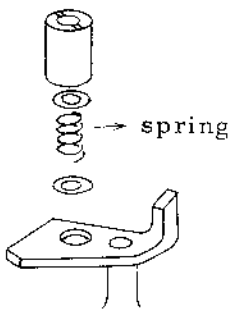
It is required that all stroke must fix within the limit of 2.0 - 2.20 mm.

Refer to the diagram item 1 for adjustment, adjust it using washer F.

2. Adjustment of pressure how to adjust.

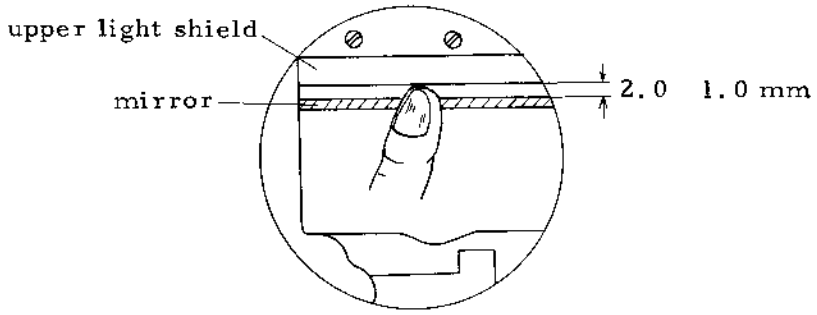
2-1 Make the shutter pressure within 500g.

Change the spring of the following diagram for adjustment.



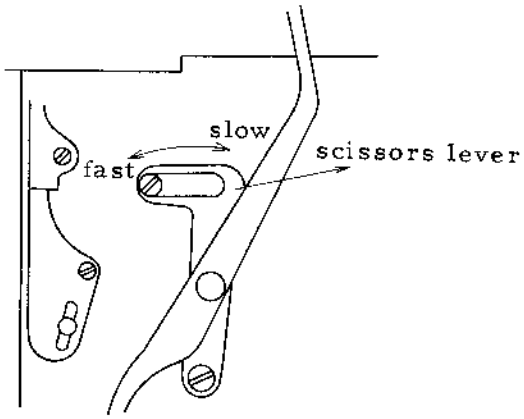
SHUTTER RELEASE ADJUSTMENT

operations	process & n.b.
1. How to adjust shutter release	1-1 Set shutter at B, at the time click the shutter and raise the mirror slowly holding the mirror with your fingers, the shutter must release within the limit 2.0 ± 1.0 mm of space between upper light shield and the reflecting surface of mirror end.



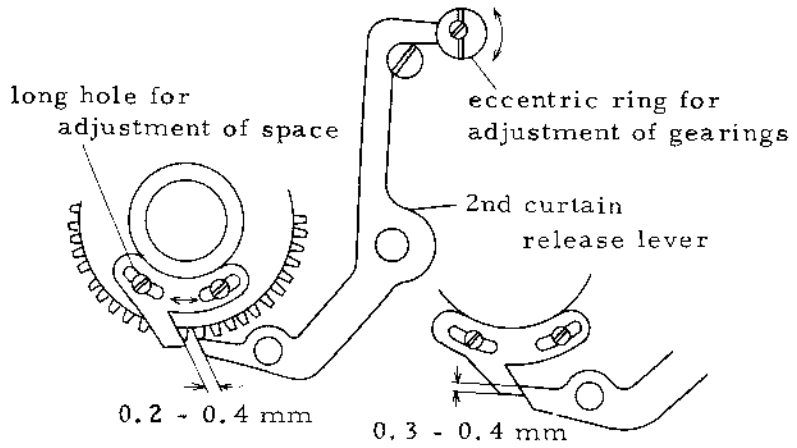
1-2 In the long hole of scissors lever in mirror box for the adjustment, adjust release timing of shutter moving right or left.

After the adjustment, fix it with diabond to the long hole screw portion.



HIGH SPEED SHUTTER ADJUSTMENT

operations	process & n.b.
1. How to adjust the space between hook and 2nd curtain release lever and its gearings	1-1 How to adjust the space between hook and 2nd curtain release lever It is required for the adjustment of space that the space between the hook and 2nd curtain release lever must be within the limit of 0.2 - 0.4 mm in the winded condition. Adjust it loosing two screws which fixes hook in the following diagram and shifting them to right or left in the long hole for adjustment of space.



1-2 How to adjust the gearings between the hook and 2nd curtain release lever

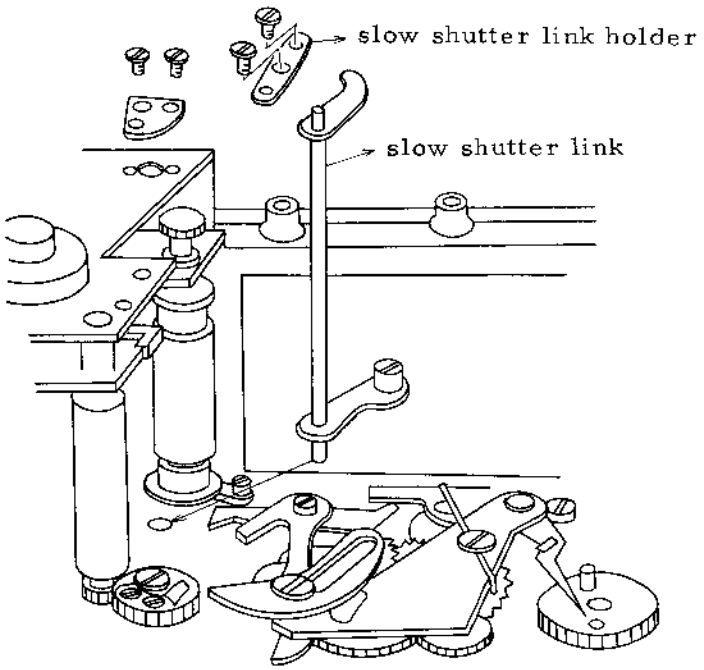
It is required that the gearings between the hook and 2nd curtain release lever must be within the limit 0.3 - 0.4 mm in the condition of setting shutter at B. Adjust it turning the eccentric ring for adjustment of gearings in the above diagram.

n.b. After the both adjustment, fix with diabond.

2. How to adjust higher speed shutter	2-1 How to adjust 1/500 sec. Adjust it turning eccentric screw of 2nd curtain release lever (19-9531).
	2-2 How to adjust 1/1000 sec. Adjust it moving release cam (13-8091).

SLOW SHUTTER ADJUSTMENT

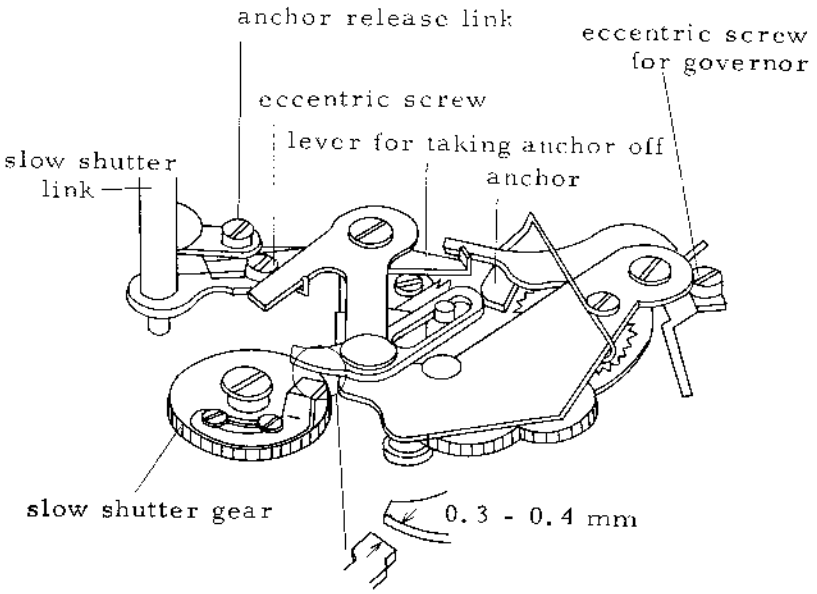
operations	process & n.b.
1. How to fix the portion of slow shutter	1-1 Fixing slow shutter link (Refer to the following diagram.)
	1-2 Fixing slow shutter link holder (Refer to the following diagram.)
	1-3 Fixing slow shutter governor (Refer to "Taking out Governor", in "Take to Pieces" item.")
	n.b. 1. Set the shutter at 1/1 sec. in the winded condition.
	2. Fix the governor bringing up near to the side of curtain.



operations

process & n.b.

2. How to adjust slow shutter



2-1 Adjustment of anchor gearing

In the position of 1/15 sec. the anchor must come off, and of 1/8 sec. it must charge, moreover, it is required that there must be a little space between the lever for taking anchor off and the anchor release link at 1/8 sec.

2-2 Adjustment of space between slow shutter pawl and governor

Adjustment of space between slow shutter pawl and governor turning long hole of the pawl to right or left in shutter speed at 1/8 sec. and in the winded condition.

adjusting scope 0.3 ~ 0.4 mm.

2-3 Adjusting method and limit

1/8 sec. 120 ms - 150 ms	Adjust it with eccentric screw.
1/1 sec. 850 ms - 1200 ms	Adjust it with eccentric screw of governor.

n.b. 1. After the above speeds are adjusted, check also the other speeds.

TAKE UP SPOOL ADJUSTMENT

operations

process & n.b.

1. How to fix spool

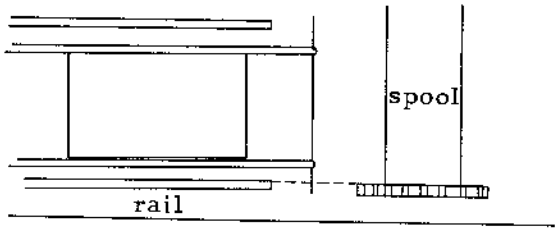
Refer to "Taking out Spool" item for the process how to fix spool.

n.b. 1. It is required that the dowel in the another surface of the spool and the ditch of the spool gear must properly gear.

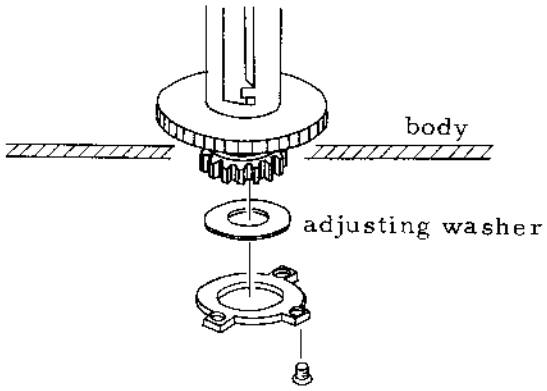
2. Upper spool shaft is counter clock thread.

2. How to adjust

2-1 Adjustment of spool high



It is required that step difference the hight of spool and the rail must not be more than ± 0.1 mm.



3. How to fix idle gear (97-0106)

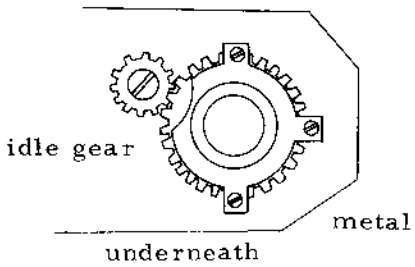
After the spool is assembled to the body, once take out the idle gear and it needs to fix it again.

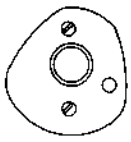
3-1 Make the all mechanism in the winded condition.

3-2 Make counter cam in the upper part of the spool to the condition of the following diagram. (turning the spool)

operations

process & n.b.





counter cam (19-9689)

3-3 At this time screw fixing the idle gear with proper gearing to the spool gear

4. How to fix winding shaft and free wheel cam

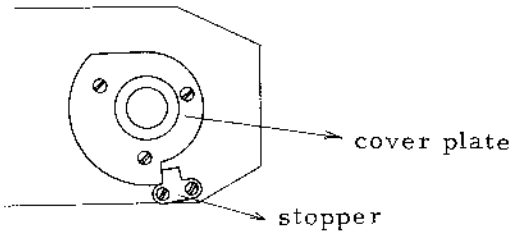
Refer to the item "Taking out spool".

n.b. 1. Put GE-7 between metal and winding up gear in the diagram of the former item.

2. Adjust thrust loose with washer of underneath of upper winding collar, the limit must be within 0.1 - 0.2 mm.

5. How to fix cover plate (13-8179)

After put in winding shaft, free wheel cam, roller, and spring, fix the cover plate combining the role of both stopper and pressure plate.



n.b. 1. Place the cover plate to the stopper, and turn the winding shaft to the winding direction little by little and fasten it in the position of screw hole fits.

2. Make it complete winded up condition.

SPROCKET ADJUSTMENT

operations

process & n.b.

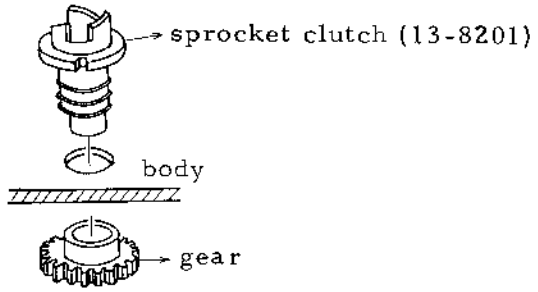
1. How to fix sprocket

In the case the sprocket is replaced, it is required that shutter speed selector, master gear, and 2nd curtain release lever must have been taken out, and in the case sprocket gear of base is replaced, it also required that shutter charge gear must have been taken out.

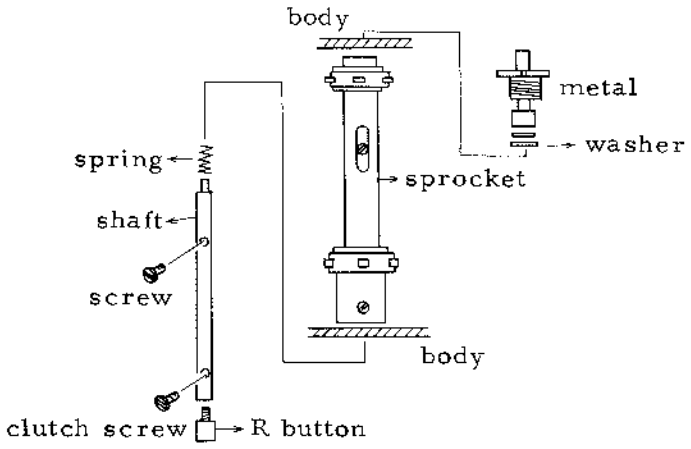
1-1 Fixing gear

Screw in the gear from the base to the body, and sprocket clutch from the insid.

n.b. Lubricate GE-7 to the revolving part, and put diabond to the screwing part.

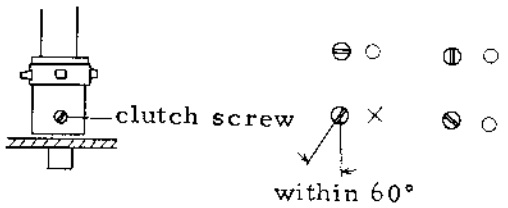


1-2 Fixing sprocket



n.b. 1. Washer is for adjustment of sprocket height and put the small one inside of the metal and use the big one for adjustment, then the loose limit is 0.1 - 0.2 mm.
After the adjustment, loose the metal and put diabond to screwing part of the metal.

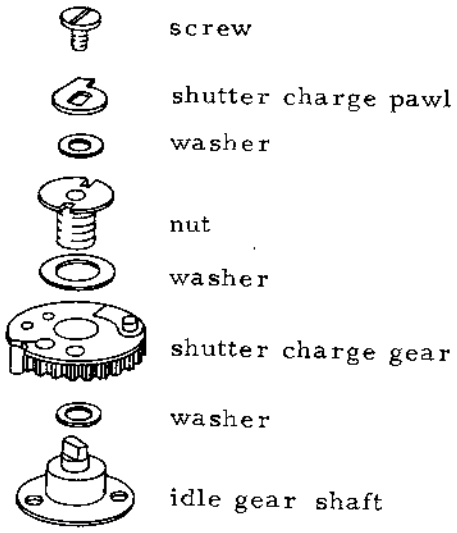
operations	process & n.b.
	1-3 Fixing sprocket shaft
	Refer to the above item.
	n.b. 1. Lubricate GE-7 to the fixing part of shaft.
	2. Make the fixing position of the clutch screw as the following diagram.



The position of X this mark is not acceptable.

SHUTTER CHARGE GEAR ADJUSTMENT

operations	process & n.b.
1. How to fix shutter charge gear	1-1 Fixing process (Refer to the following diagram.)



n.b. 1. As the fixing position of shutter charge pawl the point of the shutter charge pawl must come to the back side direction in the complete winded condition.

2. As coil spring 97-5333 of hook on shutter charge gear, put the spring through hole of the hook and put it into small ditch in brake lever 19-9694 completely, and it must move smoothly within movable scope.

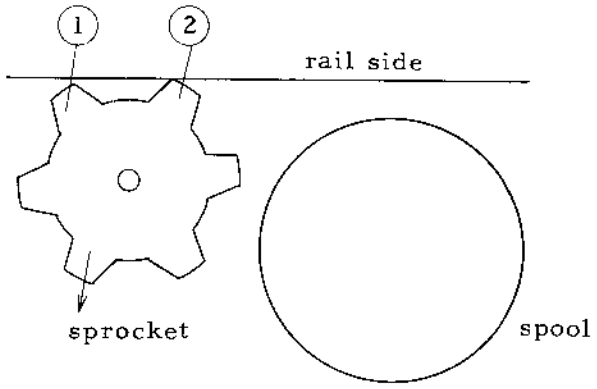
2. How to adjust

2-1 It is required that the loose up and down of the shutter charge gear must be within the limit 0.03 - 0.08 mm, and adjust the loose with adjusting washer underneath of the nut in the above diagram.

2-2 Make the up and down loose of the master shaft within the limit 0.03 - 0.08 mm, and adjust it with adjusting washer underneath of the shutter charge pawl in the above diagram.

POSITION OF PERFORATION ADJUSTMENT

operations	process & n.b.
1. How to adjust the position of perforation	1.1 Place it horizontally in the complete winded condition.



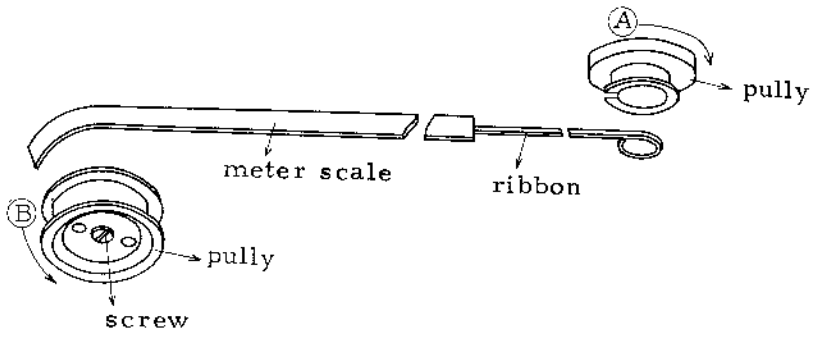
lens surface

1.2 Make 1 and 2 horizontally or the left a little bit lower.

1.3 If it hasn't come to the position as shown in the above diagram in the winded condition, lift the shutter charge gear a little bit and turn the sprocket to the right, then fix the position of perforation.

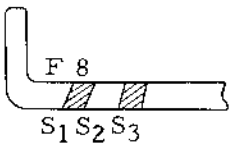
METER SCALE ADJUSTMENT

operations	process & n.b.
1. How to fix and adjust meter scale and pully	1-1 Bend the end of the meter scale round and put pliobond about 10 mm to the reverse side of the end and paste it to the pully 13-8386.
	1-2 Insert the loop of ribbon to the ditch of pully, and put it into the shutter dial shaft.

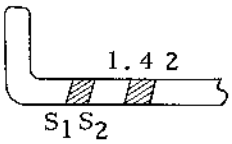


2. How to adjust	2-1 Turn the pully to the arrow direction A as the red F 8 of the meter scale should come to mid point between S_1 and S_2 of stripe and wind up the ribbon.
	2-2 Fix it setting shutter dial at ASA 800, and shutter at B. Refer to diagram A.
	2-3 Turn the spring hanger 13-8388 about one round to the arrow direction B getting rid of the slack of meter scale, and fix with screw.
	2-4 After the adjustment, it is required that F 1 must come across to S_2 setting shutter dial at ASA 100, shutter at 1/1000 sec. Refer to diagram B.

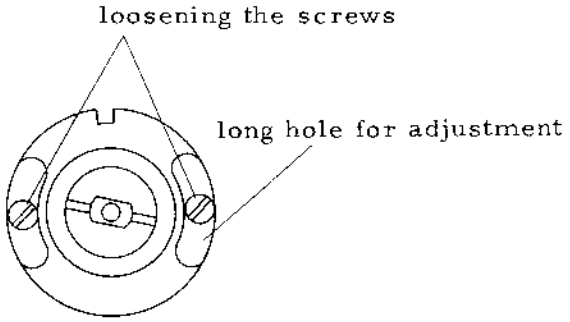
dia. A



dia. B



3. How to adjust meter scale	3-1 How to adjust position of diaphragm and S.
	If F 8 doesn't come to S_1 setting shutter dial at ASA 800, and shutter at B, adjust it loosening two screws in the following diagram and moving the long hole.



3-2 If F 1 doesn't come to S_2 setting it at ASA 100, and shutter 1/1000 sec., adjust it in the same way as the item 1.

CdS METER ADJUSTMENT

operations

process & n.b.

1. How to fix meter

Refer to the item, "Taking out Meter".

2. How to adjust

This meter doesn't have zero 0 indication, therefore, it is acceptable that it indicates within the limit in the appointed point.

2-1 adjustment of meter sensitivity for high sensitivity (H).

checking point stripe	brightness cd/m^2	limit
S_7	16	0.5 F
S_9	64	

2-1-1 In the case the needle swings too much, put ND filter in the place of CdS.

2-1-2 In the case the needle swings too little, replace the meter.

2-2 adjustment of meter sensitivity for low sensitivity (L).

checking point stripe	brightness cd/m^2	limit
S_1	64	0.75 F
S_3	256	
S_5	1024	
S_7	4096	

2-2-1 In the case the needle swings too much, stick ND filter on the pin hole filter.

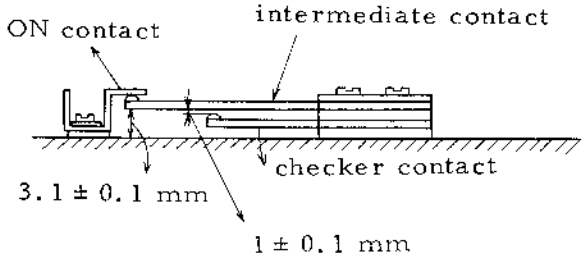
2-2-2 In the case the needle swings too little, delete and make the pin hole bigger.

n.b. The balance limit between high sensitivity S_9 and low sensitivity S_1 must be within 0.75 F.

METER CONTACT ADJUSTMENT

operations	process & n.b.
1. How to fix meter contact	Refer to the item, "Taking out meter contact".
2. How to adjust	2-1 Adjustment of ON contact, intermediate contact, and checker contact.

The spaces of each other are as the following diagram.



n.b. 1. Fix that the intermediate contact should come to the center of the ON contact's width.

2. The intermediate contact must always have a contact with the ON contact.

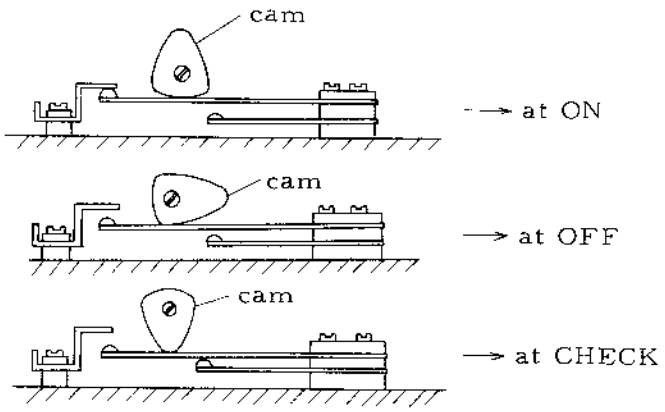
3. Put the cover on and confirm the operation of meter.

* The meter must completely operate at ON.

* The meter should not operate at OFF,

* The needle must come to the blue portion of stripes at CHECK, however, install a new battery.

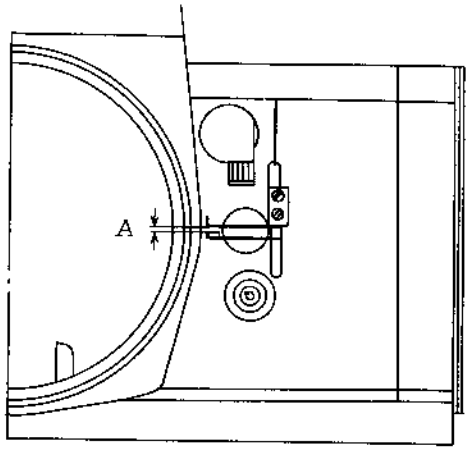
reference diagram



TIME LAG ADJUSTMENT

1. How to adjust time lag

1-1 How to adjust time lag for high speed contact



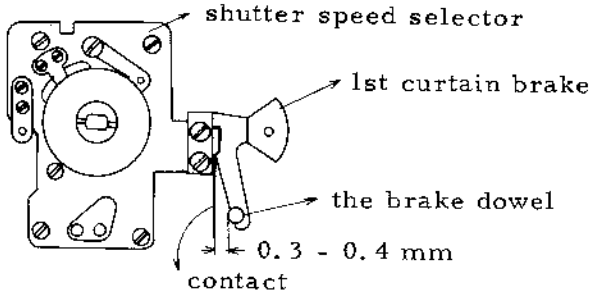
In the front view, peel the leather of the right hand side, take out cover 13-8480, and adjust the time lag changing the space of contact A.

The time lag must be within 10.5 - 13.5 m/s of PA16 transistor shutter tester, however, read the pulse at the starting point.

1-1-1 Make the space of contact A smaller if the time lag will be less than 10.5 m/s.

1-1-2 Make the space of contact A bigger if the time lag will be more than 13.5 m/s.

1-2 How to adjust time lag for X contact



Make the space between the brake dowel and the contact about 0.3 - 0.4 mm when it is winded up completely.

The time lag must be more than 1.5 m/s of PA16 transistor shutter tester, however, read the pulse at the ending point.

FILM COUNTER ADJUSTMENT

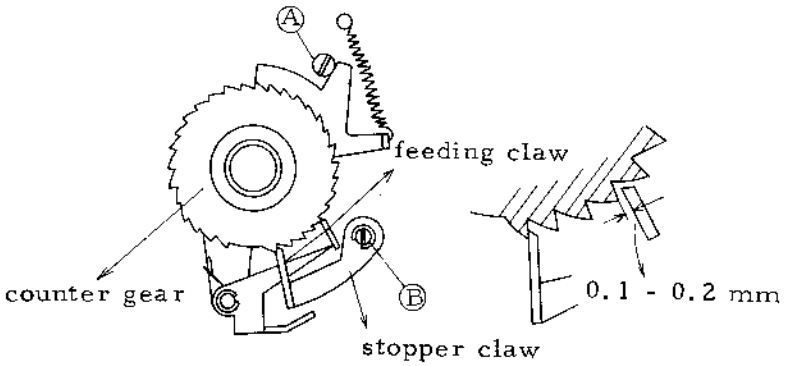
operations

1. How to adjust film counter

process & n.b.

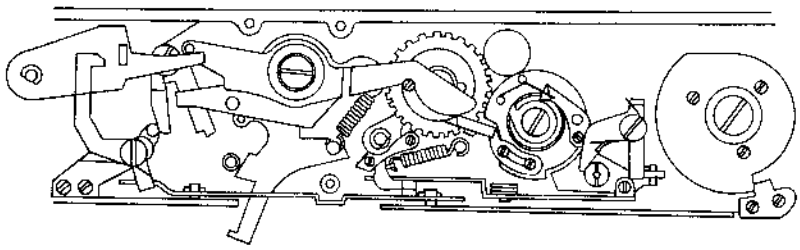
1-1 How to adjust the position of claws

In the condition that shutter is completely winded up, that the counter gear is at start, adjust as the following diagram the relationship between stopper claw and feeding claw with the eccentric screws A and B.

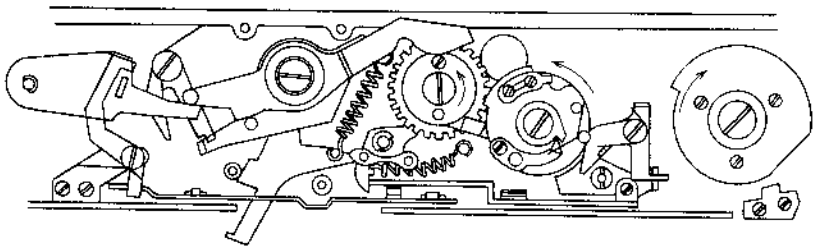


EVERY LEVERS ADJUSTMENT

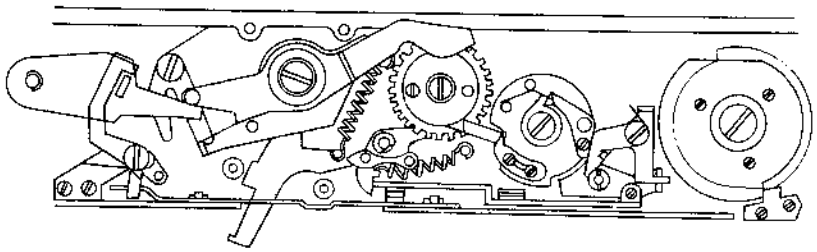
operations	process & n.b.
1. The position of every lever	1-1 the position of every lever after release



1-2 the position of every lever on the way of winding up

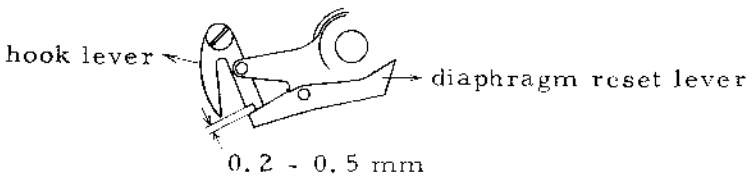


1-3 the position of every lever when the winding is completed

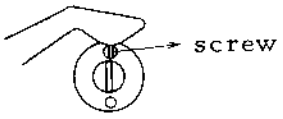


2. Adjustment of space between the levers	2-1 adjustment of space between the levers on the way of winding up Refer to the diagram 1 and 2.

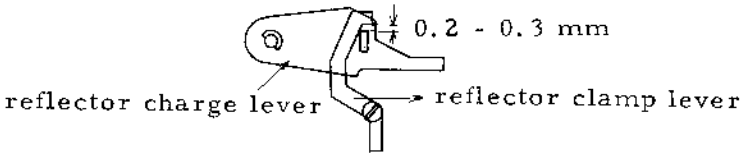
2-1-1 diaphragm reset lever 19-9548 and hook lever 19-9583



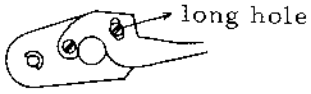
n.b. Adjust it with charge screw 13-8221 of three kind. (2.2φ, 2.5φ, 2.8φ)



2-1-1 reflector charge lever and reflector clamp lever

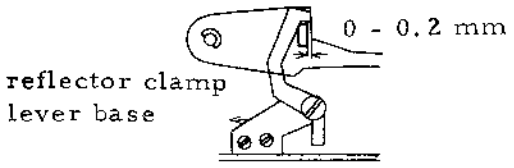


n.b. Adjust it with the long hole of reflector charge lever.



2-2 Adjustment of the space between the levers at the time of the winding is completed.

2-2-1 reflector charge lever and reflector clamp lever



n.b. Adjust it changing the position of reflector clamp lever base, however, put diabond to the screws after it is fastened up.

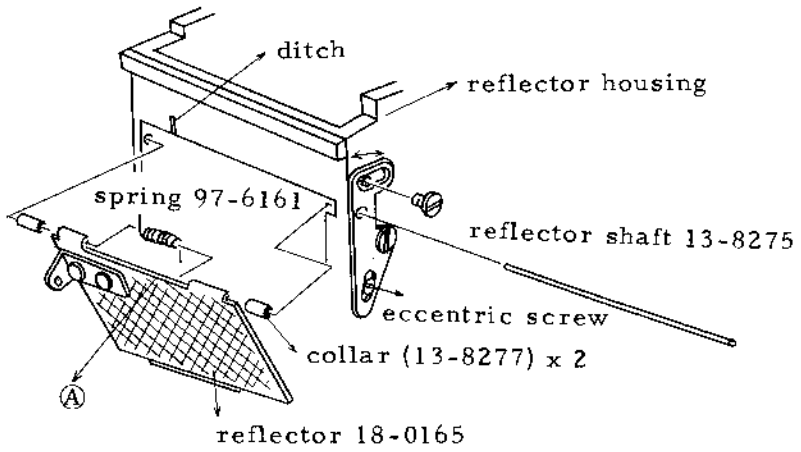
REFLECTOR ADJUSTMENT

operations

process & n.b.

1. How to fix mirror

1-1 process of fixing



1-1-1 Insert the spring end (shorter end) to A of the reflector before the fixing.

1-1-2 Insert the reflector shaft to the hole of reflector housing and insert one collar to the reflector shaft from the inside.

1-1-3 Pass the reflector shaft through the hole of the reflector, moreover, pass the spring through, and again to the hole of the reflector and pass the collar through.

1-1-4 Insert the end of reflector shaft to the reflector housing.

1-1-5 After assembled, pass the end of spring (longer end) through the ditch, then hang it to the inside of the reflector housing.

1-1-6 Fix the upper light shield.
The diagram is abridged.

2. How to adjust

2-1 How to adjust right and left position of the reflector housing

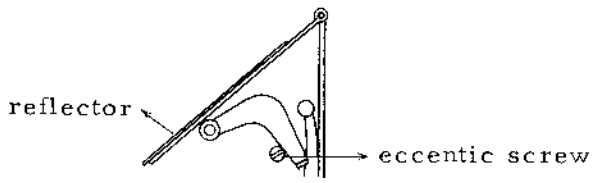
n.b. 1. Refer to the instruction of the service equipments, "Universal Type 90 Degrees Collimator".

2. Adjust it turning eccentric screw of the side of the reflector housing, refer to the diagram of item 1.

2-2 How to adjust up and down position

operations

process & n.b.



n.b. Fix it to the equipment, and set the reflector 45 degrees with eccentric screw.

TROUBLE, CAUSE & REMEDY

WINDING

At the time of winding, it is caught.

1 If there is a big friction at the inserting part of body metal and gear.

- 1-1 Replace the sprocket gear.
- 1-2 Put liquid molybdenum grease to the inserting part.

2 If there is too much loose at the inserting part of step gear 97-0105.

- 2-1 Adjust as there is no loose to the direction of thrusting putting eleven balls to the upper and bottom.

3 If the space between every gear which is connected to the winding is too narrow.

- 3-1 Replace defective gear.

It sticks on the way of winding up.

1 If the counter cam 19-9689 hits the bottom surface of 1st curtain brake head.

- 1-1 Delete that portion of 1st curtain brake head.

2 If it is caught between dowel gear and 2nd curtain spring drum gear.

- 2-1 Replace dowel gear.

3 Because of too big up and down loose of winding shaft, the cover plate 13-8179 rides on the stopper 13-8178.

- 3-1 Adjust the loose of winding shaft.

The return of winding lever sticks on the way.

1 If the inserting of free wheel cam 13-8180 and roller of winding gear 97-0104 is too tight.

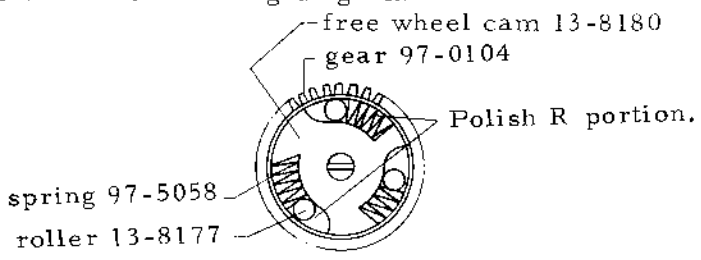
- 1-1 Replace the free wheel cam or the gear

Stick at the time the winding lever is completely winded up.

1 Stick of free wheel cam 13-8180 and roller

- 1-1 Replace the free wheel cam or polish R portion.

Refer to the following diagram



Too heavy winding up

1 The curtain is too tight.

1-1 Adjust it withing the standard.

13.5 ms ± 0.5 ms 15 ms ± 0.5 ms

2 If there is too small space of every lever for diaphragm, reflector charge lever 19-9547 and diaphragm reset lever 19-9548.

2-1 Readjustment of every diaphragm lever. Refer to "How to Adjust."

3 1st curtain brake is too strong.

3-1 Make jump stop of 1st curtain weak.

4 Whether every gear is fastened too much to the direction of thrust.

4-1 Rotation of every gear and adjustment

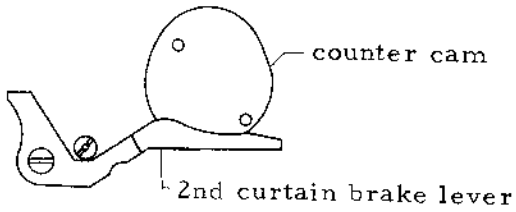
5 Too much deep gearing of spring 97-6158 and sprocket gear.

5-1 Replace the spring.

Incompetence of winding

1 Counter cam 19-9689 gets in underneath of 2nd brake lever 19-9528.

1-1 Readjustment of the counter cam's hight or replacement of 2nd curtain brake lever.



2 coming off of coil spring 97-5333

The movement of shutter charge hook which is included in shutter charge gear 19-9543 is not smooth, consequently the shutter charge pawl and the hook also doesn't gear smoothly and only the shutter charge gear turns and the dowel or the master gear doesn't rotate. Therefore, the end of the brake lever hits the dowel, then the counter cam becomes incompetence of rotation.

2-1 Wind the winding passing 2nd curtain brake lever away, and then make the gearing of shutter charge pawl and the hook, simultaneously adjust the spring move.

3 Because of heavy movement of every lever underneath and every diaphragm lever, the diaphragm lever doesn't completely return to the starting point, therefore, diaphragm release lever 19-9545 and 19-9549 cannot gear one another and the winding becomes incompetent.

3-1 Readjust the movement of every lever. Refer to "How to Adjust."

4 Because 2nd curtain doesn't work correctly, the hook lever (19-9583) doesn't come off, therefore, the diaphragm reset lever isn't able to return, and simultaneously the diaphragm lever cannot also return, so that the diaphragm lever and the diaphragm release lever hit one another.

4-1 Readjustment of 2nd curtain's operation

5 2nd curtain sticks because of the transformed bottom part of the body inside or light shield of mirror box side.

5-1 Amend the transformation of light shield.

6 In the case something gets inside so that all the operative parts don't work properly.

6-1 Observe the inside and get rid of it.

7 The diaphragm lever doesn't return properly because of the weakened coil spring 97-5063 and it hits to the diaphragm release lever.

7-1 Replace the coil spring 97-5063.

8 Because of poor position of reflector reset gear, at the time 2nd curtain runs out, the dowel comes off from the hook lever, and the winding becomes incompetent.

8-1 Readjustment of the reflector reset gear position.

When winding up, lever slips.

1 In the relation of formation in the finished surface of free wheel cam 13-8180 and roller forwarding it slips.

1-1 Replace free wheel cam 13-8180.

1-2 Replace winding gear 97-0104.

When winding up rightly, retainer doesn't easily come in.

1 Space of master retainer is too narrow.

1-1 Make the space 0.1 - 0.15 m/m.

2 Poor function of shutter release lever 19-9534.

2-1 Readjust.

3 Because of loosened gear of 1st curtain master shaft Y00-0484 and retaining of the shaft (taper pin), the space of retainer becomes poor.

3-1 Replace the master shaft Y00-0484.

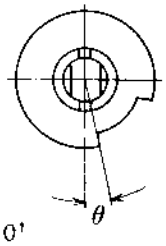
4 Poor function of scissors lever 19-9555.

4-1 Readjust or replace it.

The winding lever touches to the shutter dial.

1 Misselection of winding lever seat 13-8057.

1-1 Refer to the following diagram, use either $\theta = 4°$, $5°30'$, and readjustment.

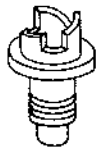


1 $\theta = 4°$

2 $\theta = 5° 30'$

REWINDING

Rewind button doesn't return when winding has completed.	1	Poor finish of clutch 13-8201's surface so that the clutch screw cannot pass through.
	1-1	Replace the clutch.



There is a hollow.

clutch

	2	Clutch screw ditch and clutch convexity feeds one another.
	2-1	Replace the clutch screw.
Sprocket doesn't rotate counter.	1	The end of sprocket shaft 13-8199 is too round so that if the sprocket is turned counter, the clutch taking off lever slips.
	1-1	Replace or amend the sprocket shaft.
	2	Sticker or cemedine which is put on ring dowel 13-8197 at the time of tightening comes off so that the clutch taking off lever slips.
	2-1	Cleaning
	3	The gearing of sprocket gear 97-0107 and the retained metal of the body become extremely bad, and the rotation of sprocket becomes too heavy.
	3-1	Replace the sprocket gear or lubricate liquid molybdenum to the gearing portion.
	4	The screw of sprocket gear and sprocket clutch 13-8201 becomes loose so that up and down loose of the sprocket is gone then the rotation of sprocket becomes too heavy.
	4-1	Readjustment

SHUTTER

Diaphragm, mirror and shutter doesn't work.	1	Poor balance of strenghth of coil spring 97-5062 so that reflector clamp lever 13-8267 doesn't come off from reflector charge lever 19-9553 and shutter doesn't work.

1-1 It is required that it must be replaced as the strenghth of the reflector clamp lever must come off more than 40g stronger than the coil spring comes off, adjust, simultaneously, every operative part must work rightly.

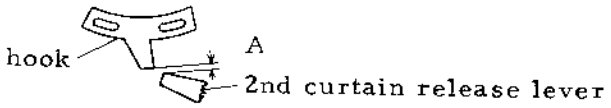
2 Caused by the poor operation of every lever in front cover.

2-1 Readjustment

The curtain doesn't operate at B.

1 The space of portion A in the following diagram is too narrow, or by the cause of poor formation of hook 13-8084.

1-1 Adjustment of eccentric ring or replacement of hook 13-8084.



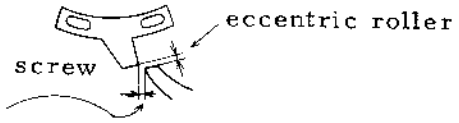
Skipping at B

1 2nd curtain release lever 19-9530 doesn't work normally.

1-1 Readjustment especially up and down loose.

2 There is no space between hook 13-8084 and 2nd curtain release lever 19-9530.

2-1 Readjustment



Adjust the space with two screws.

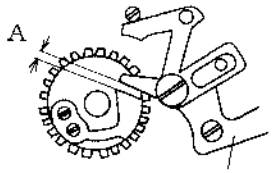
3 The work of shutter release lever 19-9534 is too poor so that it doesn't set firmly.

3-1 Readjustment

4 At the time winding is not domplete (before retaining set) if the shutter button is clicked.

4-1 This phenomenon happens mechanically, therefore, it is not possibly adjusted.
If those which are extremely too poor, adjust the space of retaining widening to 0.1-0.5 m/m.

1st curtain jumps.	1	The brake is too weak.
	1-1	Readjust with the adjusting screw of brake band 13-8508.
	2	The brake band 13-8508 is transformed, and in the case it is useless.
	2-1	Replace the brake band 13-8508.
	3	If the shutter speed becomes extremely changed.
	3-1	Adjust the speed within 15 ms ± 0.5.
1 second stop	1	The gearing of space A between slow shutter pawl and slow shutter governor 18-0124 is too deep.



13-8117 18-0124

	1-1	Adjust the space A to 0.3 - 0.4 m/m at 1/8 sec. time. Replace the slow shutter pawl 13-8117.
	2	Too much gearing of anchor in the governor
	2-1	Readjustment of the gearing or replace the governor.
Skipping 1/8 sec.	1	Too much shallow gearing of anchor in the governor
	1-1	adjustment
	2	Slow shutter fixing cam which is underneath of shutter speed selector and slow shutter link 19-9538 doesn't touch, therefore, washer on the cam and end of slow shutter link hit one another, so that the position of slow shutter link isn't settled and it skips.
	2-1	Amendment of washer transformation.
Abnormal sound at the time governor returns	1	After the governor operates the anchor doesn't completely come off.
	1-1	Bend anchor release link 19-9539 and adjust.
	2	Reflector reset gear 19-9551 hasn't been fixed at the right position, therefore, it cannot take the anchor of the governor off.

2-1 Adjust the position of reflector reset gear 19-9551.

Every high speed of shutter are poor.

1 Varied time passes away.

1-1 Adjust it within the appointed standard.

Lack of lubrication

1 Lack of lubrication of inserting part of slow shutter gear 97-0102 and body stud.

1-1 Lubricate.

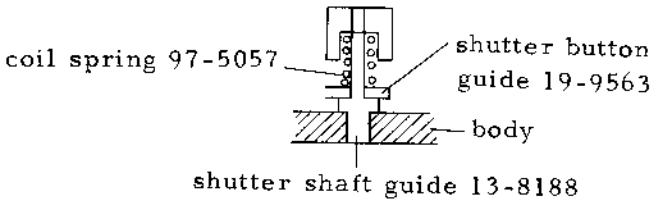
Shutter button is not smooth.

1 Operation of clutch release lever 13-8186 isn't smooth.

1-1 Amend the part or replace.

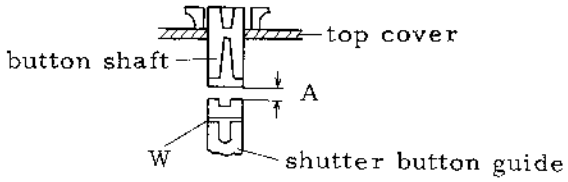
2 Roughness of coil spring 97-5057 and shutter shaft guide 13-8188.

2-1 Readjustment



Lack of stroke of the button

1 Those of which has no space A between the shutter button guide and the button shaft



1-1 Adjust the above space A to 0.1 - 0.2 mm with washer.

Release position of shutter is fast or slow.

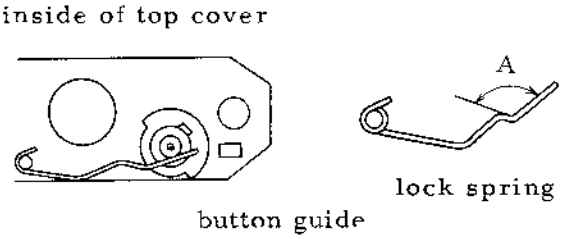
1 Loosened end screw of release lever (19-9544).

1-1 Adjust the dropping amount of the button to 1.5 - 1.7 mm.
After the adjustment, put diabond to the screw.

Not be able to get time lock

1 Because of inferior transformation of T lock spring notching portion of button guide doesn't closely fit to it in parallel.

1-1 Amend the portion A of T lock spring.



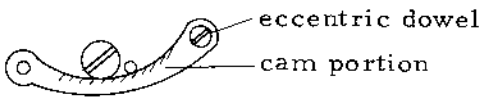
SELF TIMER

Self timer has been started, however, the shutter doesn't release.	1	Lack of strok of lever for shutter starting of self timer
	1-1	Replace to the bigger screw which attaches to the shutter shaft. (20ϕ, 25ϕ, 30ϕ)
Not be able to set the self timer	1	Defective self timer itself
	1-1	Replace the self timer.
	2	Coming off of starting release spring of the self timer
	2-1	Adjustment
Poor timing of self timer starting	1	Poor positioning of start adjusting lever which is attached to shutter shaft
	1-1	Adjust the dropping amount of the button to 0.75 - 0.85 mm.
Self timer is released simultaneously.	1	Poor positioning of start adjusting lever which is attached to shutter shaft
	1-1	Adjust the dropping amount of the button to 0.75 - 0.85 mm.

REFLECTOR

Poor returning of mirror	1	Hitting of hinge 13-8272 and light shield 13-8346
	1-1	Amendment
	2	Spring 97-6161 is too weak.
	2-1	Replace 97-6161.
	3	In the case the spring comes off from ditch.

		3-1 Readjustment.
	4	The inserting of hinge and pin 13-8275 is too tight.
		4-1 Put a reamer to the hinge or replace the hinge, and the pin.
	5	Bacause of transformation of light shield 13-8328, it touches to the mirror end.
		5-1 amendment of 13-8328 or the replacement.
	6	Poor positioning of mirror sticking so that it touches to 13-8328.
		6-1 replacement of mirror.
The mirror doesn't properly return at the time the mirror cramps.	1	The operation of slide lever 19-9667 doesn't work properly.
		1-1 .adjustment of thrust loose of 19-9557.
Lack of turning up of the mirror at the time the mirror cramps.	1	Cam portion of cramp lever is (-).
		1-1 replacement of part



	2	Poor adjustment of eccentric dowel
		2-1 readjustment
Inferior mirror 45°	1	Refer to the item, "How to Adjust".
The mirror doesn't operate when the shutter is clicked.	1	Those which spring 97-6149 comes off
		1-1 readjustment
	2	Hook 13-8311 which is retained to inter locking lever 19-9561 doesn't work normally.
		2-1 readjustment

FILM COUNTER

Film counter doesn't forward.	1	Stop claw hits to feeding claw spring 97-6123, then it doesn't make counter gear stop.
		1-1 replacement of feeding claw spring or the amendment

	2	In the cause of fixing time of counter reset lever 19-9522 or its transformation, the hight of high and low is not proper so that the end of counter reset lever and back cover don't touch one another, it comes above or under the side of the back cover, therefore, forwarding claw which touches to 19-9522 runs away and it doesn't gear with counter gear and forwarding becomes defective.
Film counter doesn't return.	1	Eccentric adjusting position of stopper claw 19-9523 is to the back cover, in the case the stopper claw runs away, it touches to the inside of the top cover, and it doesn't return.
	1-1	readjustment
	2	Too much weak tension of spring 97-6155.
	2-1	Replace the spring.
	3	If the rotating angle of ratchet claw becomes larger, winding amount of the spring is increased, it has a friction in the direction of thrust and it cannot return.
	3-1	Replace the spring.
Aberration of film counter indicator.	1	poor positioning of film counter dial 13-8032.
	1-1	It is required that the numbers must be caught to the indicator.

CdS METER

The meter doesn't work.	1	Caused by poor wiring, short-circuit, poor contacting.
	1-1	readjustment
	2	Battery is gone out.
	2-1	Replace the battery.
	3	Defective meter it self.
	3-1	Replace the meter.
The needle of meter is caught.	1	The needle is too long and touches to the top cover.
	1-1	Replace the meter.
	2	In the case the needle touches to the upper side of meter fixing screw.

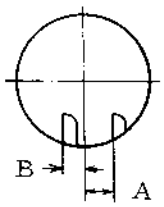
	2-1	readjustment of the needle hight (Do not bend the needle to right or left.)
	3	The needle and the diaphragm belt touch one another.
	3-1	readjustment of the needle hight (Do not bend the needle to right or left.)
	4	When the needle returns to the original point, the needle and light shield touch one another.
	4-1	amendment of light shield bending part
	5	Those which dust gets in the inside meter.
	5-1	cleaning of the inside or replacement of the meter
Poor positioning of meter	1	Varied caused by loosened pulley fixing screw
	1-1	readjustment
	2	Those which diaphragm drum fixing screw is loosened
	2-1	readjustment
	3	At the time the shutter dial is fastened, the use direction of the loose of the shaft which is the loose of shutter selector shaft and shutter dial isn't good.
	3-1	readjustment
Inferior precision of meter	1	Obviously the meter is inferior itself, however, check the following items before the replacement.
	1-1	adjustment of 0 zero.
	1-2	In the case the precision is (+) in the every case, use ND filter together.
	1-3	In the case it is (+) in using meter L, use ND filter in front of pin hole filter.
	1-4	In the case it is (-) in using meter L, make a hole of pin hole filter larger to (0.35ϕ) and use it.
	1-5	In the case point which doesn't fall under to the above items, replace the meter.

SYNCHRONIZATION

Inferior continuity	1	Defective plug
	1-1	replacement of plug
	2	Disconnection of wire and defective wiring
	2-1	readjustment.
	3	Poor contacting and touching
	3-1	Readjustment.
Inferior FP time lag	1	Poor relationship between switch in timing of FP contact and shutter starting timing Inspect it at the position of mirror goes up.
	1-1	shutter starting timing 2 mm ± 1 mm
	1-2	FP switch in timing 4 mm ± 0.5 mm
Inferior efficiency of FP contact	1	Switch contact is apart.
	1-1	readjustment
	2	Those which has poor connection of FP contact.
	2-1	readjustment
Inferior time lag of X contact.	1	Because of too strong brake of 1st curtain, the shutter becomes double exposure, and the switch becomes irregular.
	1-1	adjustment of double exposure
	2	The shutter doesn't fully open at X.

DIAPHRAGM LEVER

Inferior strength of diaphragm lever	1	Caused by the inferior diaphragm spring.
	1-1	replacement of diaphragm spring Adjust it to 150 ± 20 gr at B = 2.4 mm.



Inferior positioning of diaphragm lever	1	Adjusting screw of hook lever 19-9583, diaphragm release lever 19-9545 become loose and transform.
	1-1	Refer to the above diagram. Adjust more than A = 5.8 ± 0.3 mm, B - 2.4 mm.

FOCUS

Inferior precision of infinity.	1	The time passes by the length of mounting back has changed.
	1-1	Readjust to 42.1 ± 0.02 mm. However, this measurement is not from the mounting to the pressure plate, but use a piece of glass.
	2	Inferior positioning of high for flannel box.
	2-1	readjustment.
	3	Those which are inferior lens focus
	3-1	readjustment

BACK COVER

Shock at the time the back cover is closed.	1	The claw of back cover and the claw of open and shut cannot engage one another properly.
	1-1	Adjust bending the claw of back cover.
Too weak opening of back cover	1	Those which the pressure plate is too weak.
	1-1	Adjust it making spring strong.
	2.	Those which the move of back cover 18-0158 is too heavy or it hits to the body.
	2-1	readjustment
Irregular back cover.	1	inferior part of open and shut claw 19-9562.
	1-1	replacement

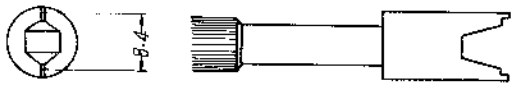
CANON SERVICE TOOLS LIST

CANON CAMERA MODEL FX
(REFERENCE NO. 1-20301)

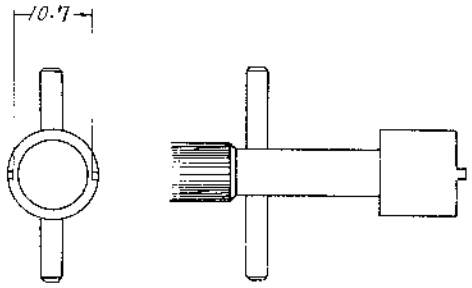
TESTING EQUIPMENTS

Use		Name of Testing Equipment
Exposure Meter	1.	Inspection device for Canonet meter
	2.	Cover for Canon FX photocell meter
	3.	Resistance meter (0-1 mega ohm)
Shutter	1.	PA-16 transistorized shutter tester or Simplified shutter test unit
Focal plane	1.	42.14 dial gauge
Release lever	1.	1-20301 inspection tool for position of release lever
Adjusting	1.	1-20301 substitutional cam - 1
	2.	1-20301 substitutional winding lever - 1

SPECIAL SCREWDRIVERS

T06A-13-8033-1 

Tightening counter gear

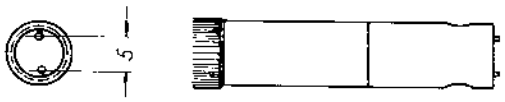
T06A-13-8043-1 

Tightening spool shaft

T06A-13-8061-2

Tightening winding lever

T06A-13-8154-1



Tightening shutter dial

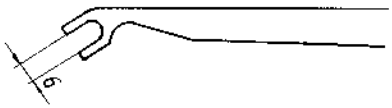
T06A-13-8367-1

Tightening battery contact

T06A-97-1091-1

Tightening shutter charge gear

T01S-13-8075-2



Adjusting shutter speed
(higher speed)

Canon SERVICE MANUAL REPORT

Serial No. AC10-014

Service Manual

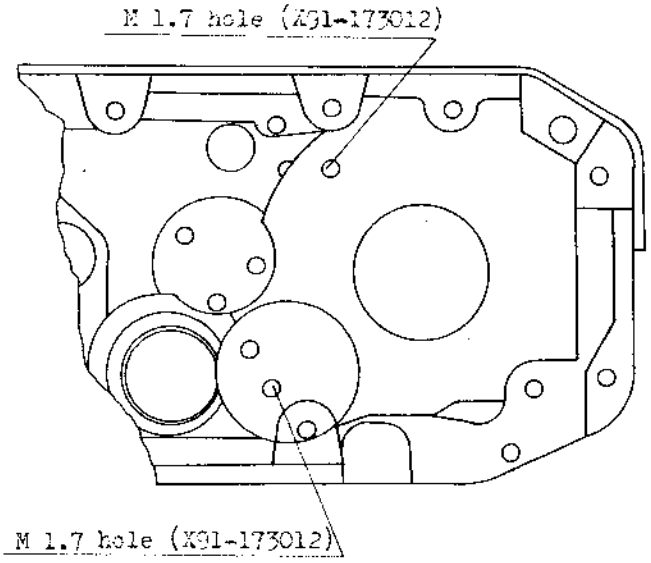
Issued by Service Department, Canon Camera Co., Inc.

Date APR 10 1965

Pertaining to Li ht Leakage of Canon FX, FP

Phenomenon

Body (19-9727) of Canon Pellix is diverted to body of Canon FX, FP at present time, however, as the body of Pellix has two more holes compared with the body of FX, FP. refer to the following diagram, if it is assembled without being covered a lid on the holes, there is a danger light pi ht leak.



2 Disposition in Service Department

FX, FP of the body which has the screw holes without being covered a lid has only shipped approximately 150 - 200 pieces on 11th, 12th February, 1965 both FX, FP and the classification numbers are given as follows.

FX F0208, F0209
FP F0207, F0208.

So if FX, FP which is assembled with this specific body returns to you for repair, no matter what li ht leaks or not, fill up screw X91-173012 to the holes mentioned above.

Canon SERVICE MANUAL REPORT

Serial No. [illegible]

Service Manual

Issued by Service Department, Canon Camera Co., Inc.

Date [illegible]

[illegible]

1. [illegible]

[illegible] mirror [illegible] mirror [illegible] [illegible] [illegible]

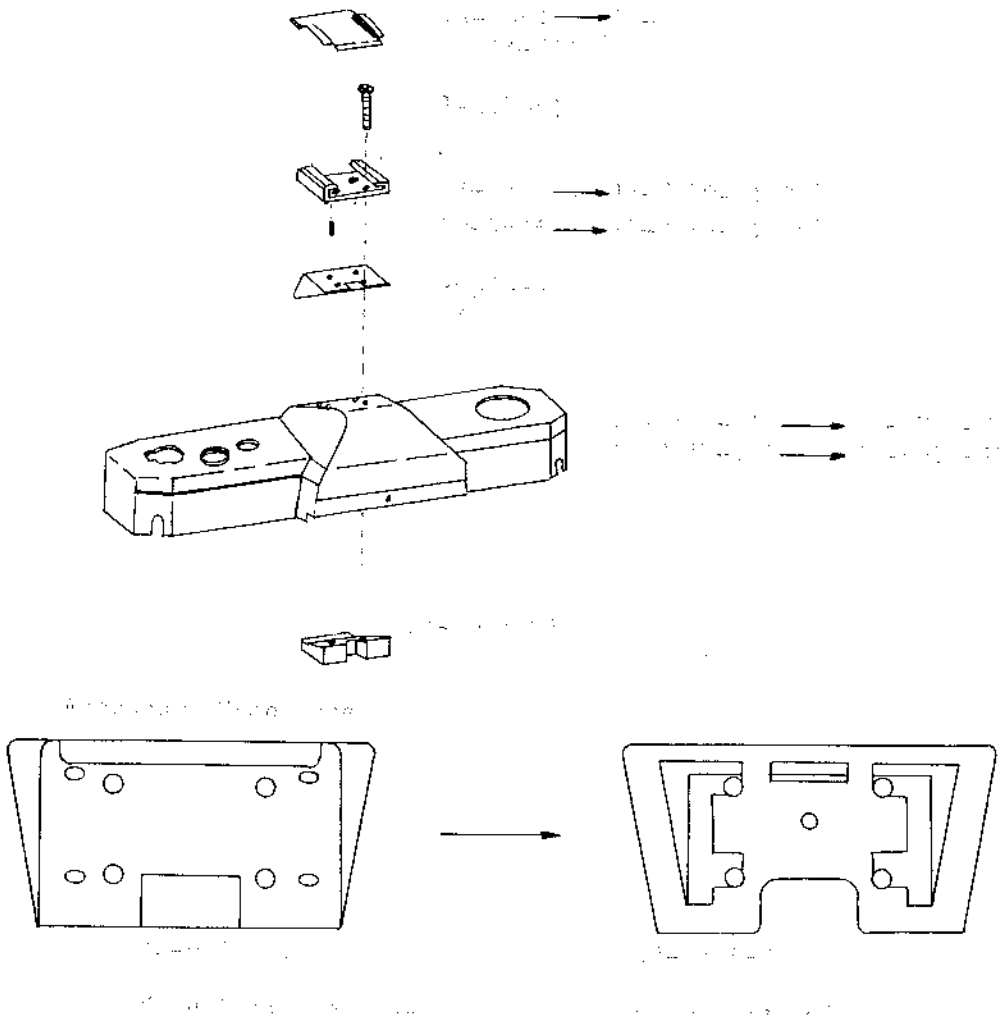
Canon SERVICE MANUAL REPORT

Serial No.

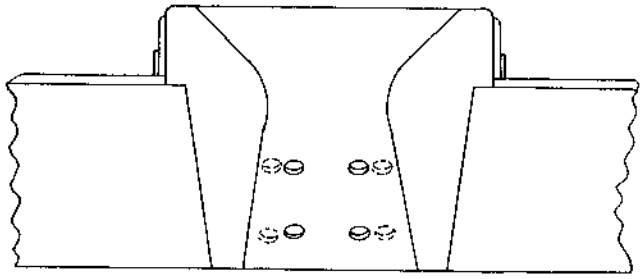
Service Manual

Issued by Service Department, Canon Camera Co., Inc.

Date



Top Cover



Position of screw hole was moved
clockwise.
Dotted line indicates old hole
position.

[illegible]

1. [illegible]
   [illegible] not interchangeable.
   Set to new 1 old parts may cause by the service
   department. Therefore, when removing parts, be sure to
   [illegible] with proper.

2. [illegible]
   [illegible]

3. [illegible]
   [illegible]
   [illegible]

AC10-019½

Canon SERVICE MANUAL REPORT

Serial No. ACL-[illegible]

Service Manual [illegible]

Issued by Service Department, Canon Camera Co., Inc.

Date APR -6 1967

[illegible]

1. [illegible]

[illegible]

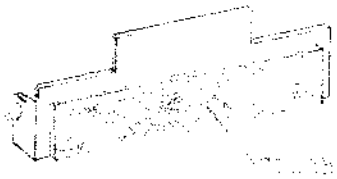
A) [illegible]

[illegible]

B) [illegible]

[illegible]

C) [illegible]



[illegible]

2. [illegible]

[illegible]

Canon SERVICE MANUAL REPORT

Serial No. 4010-031E

Service Manual

Issued by Service Department, Canon Camera Co., Inc.

Date 1967. 5. 18

Change of Front Plate and Mount for Canon FX

1. Matter Changed

In connection with the blind proof device of FT and FX mount, FX has also been improved as follows.

Front Plate	[illegible]	19-9916-08
Mount	12-6331-03	12-6331-05
Washer	13-6313	13-9055
Light Shield	13-6332	13-9054

For further details, refer to Service Manual Report No. A021-07.

2. Guide for Repair Service

It will be no interchangeability between old and new parts except for the washer.

2M65. 10- 9123 AM 65.1- 1500 A

Canon SERVICE MANUAL REPORT Serial No. AC10-032E
Service Manual C-010
Issued by Service Department, Canon Camera Co., Inc. Date 1967. 8. 23

Altered Rewind Crank of Canon FX

Alterations

For making the operation of Rewind Crank well, the Crank is made to common as the one for FTQL and PXQL.

1 Rewind Crank (Unit)

The number 18-0161 is altered to 18-0260.
Refer to FTQL and PXQL Service Manual for the component parts.

2 Meter Switch Knob 13-8400

New Rewind Crank is made larger in diameter so that planning off the edges (0.4C) are supplemented to the Knob.

Repairings

In principle, replace Rewind Crank, the former Crank to the former type and the new one to the new type. If, however, the position of Top Cover to Rewind Crank Shaft is not shifted, it is possible to fix a new Crank to the former type of Camera.

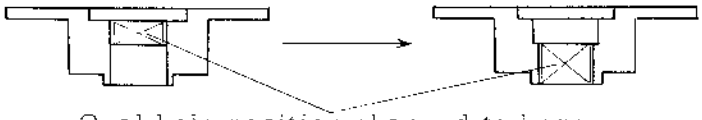
Canon SERVICE MANUAL REPORT Serial No. AC10-033E
Service Manual C-010
Issued by Service Department, Canon Camera Co., Inc. Date 1967. 8. 23

Altered Shutter Speed Dial 13-8155 of Canon FX, and FTQL

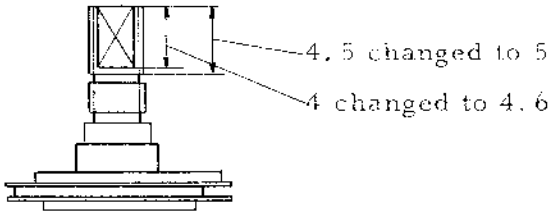
Alterations

Oval hole position for Shutter Speed Dial 13-8155 of FX, FTQL is made altered to the same position Pellix as follows.

1 Shutter Speed Dial 13-8155

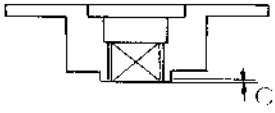


2 Shutter Speed Cam 19-9580



Repairings

As for FX, if a new Shutter Speed Dial is fixed to the former Shutter Speed Cam, small end play may come out. In this case, cut down about 0.3mm at the bottom of Shutter Speed Dial, then fix it.



There is no question in FTQL, but as to FX, in case of fixing the former Shutter Speed Dial to a new Shutter Speed Cam, both Shutter Speed Dial and Shutter Speed Selector Base are not classified, therefore, take heed when the Shutter Speed Dial is replaced.

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Canon SERVICE MANUAL REPORT

Serial No. AC10-034E

Service Manual C-010

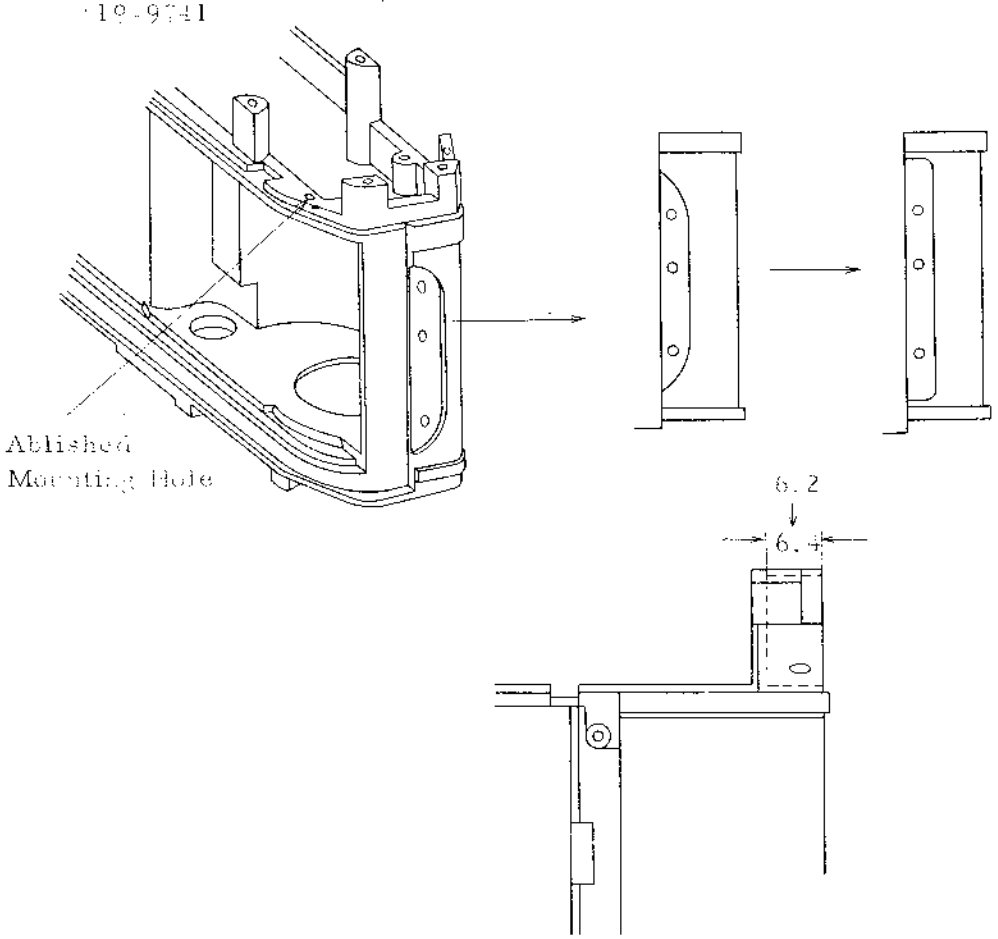
Issued by Service Department, Canon Camera Co., Inc. Date 27th Oct., 1967

Altered Body Case, Canon FX

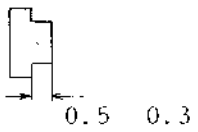
Alterations

The part of Body Case (B.P.) 19-9741 where hinge is fixed, the part number has been previously altered from 19-9516, is made all common to FTQL and PXQL. The mounting hole of Screw X91-142379 for Reset Lever is abolished. The depth 6.2mm of the Mercury Battery Box is also altered to 6.4mm as well as FTQL and PXQL.

Body Case (B.P.)
19-9741



The number 13-8372 Battery Cover is altered to 13-8372-05. The material vinyl chloride is altered to polypropylene and the thick 0.2mm is altered to 0.4mm. The number 13-8368 Insulator is altered to 13-8368-03.



The number 13-8326 Hinge is altered to 13-8948.

13-8326 is stopped, then 13-8948 which is common to FTQL and PXQL is applied instead. Collar 13-8521 and Screw X91-142379 are stopped.

Repairings

Old Hinge 13-8326 can't be used to the new Body Case.
Old Mercury Cover 13-8372 can't be used to the new Body Case.
Old Insulator 13-8368 can't be used to the new Body Case 19-9741-12, but the new Insulator 13-8368-03 can be used to the old Body Case 19-9741.

The number 13-8372 Battery Cover is altered to 13-8372-05. The material vinyl chloride is altered to polypropylene and the thick 0.2mm is altered to 0.4mm. The number 13-8368 Insulator is altered to 13-8368-03.

Canon SERVICE MANUAL REPORT Serial No. AC10-035E

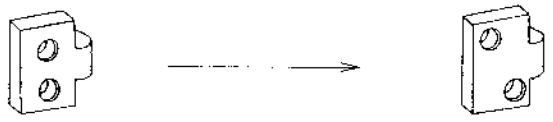
Service Manual C-010

Issued by Service Department, Canon Camera Co., Inc. Date 24th January, 1968

Altered Brake Band Holder, Canon FX

Alterations

The mounting hole's position of Brake Band Holder 13-8510 is altered. Consequently, the mounting hole's position of Body 19-9741 is also altered.



13-8510 to 13-8510-03

Repairings

Both new 13-8510-03 and former 13-8510 are stocked for spare for the time being, so specify the part number you need.

SMRs. 191--5122 A1 65. 12 10M

Canon SERVICE MANUAL REPORT

Serial No. AC10-036

Service Manual C-010

Issued by Service Department, Canon Camera Co., Inc.

Date 12th April, 1968

Altered Battery Cover, Canon FX

Alterations

The material of Battery Cover 13-8372 made from white polypropylene in semitransparency is altered to black polypropylene in opacity, because as this can be diverted to Canon TL. Since the booster circuit is eliminated from the structure in Canon TL, as the socket hole for the booster should not be conspicuous by appearance, 13-8372 is made black.

PRINTED IN JAPAN 191 – 0122 A4 65. 12 1967 A

Canon SERVICE MANUAL REPORT Serial No. AC10-037E

Service Manual C-010

Issued by Service Department, Canon Camera Co., Inc. Date 28th May, 1968

Altered Screws, Canon FX

Alterations

Screws (-) for fixing Top Cover or Base Plate are altered to Screws (+), and the numbers are also altered as specified below.

Present Number		Altered Number
Screw X25-170256 x 3 for Top Cover (E.P.) 19-951[illegible]	→	X20321 x 3
Screw X25-140306 for Top Cover (front) 19-9517	→	X20320
Screw X24-170306 x 2 for Base Plate 19-9521	→	X20319 x 2
Screw X25-170256 for Base Plate (side) 19-9521	→	X20321
Screw X23-170256 for Front Cover (E.P.) 19-9590	→	X20324
Screw X96-170013 for Front Panel 19-9518	→	X20318

Repairings

Each threading pitch of these altered screws (+) above is the same as the respective present screw's. Specify the part number upon ordering.

Canon SERVICE MANUAL REPORT Serial No. AC10-038E

Service Manual C-010

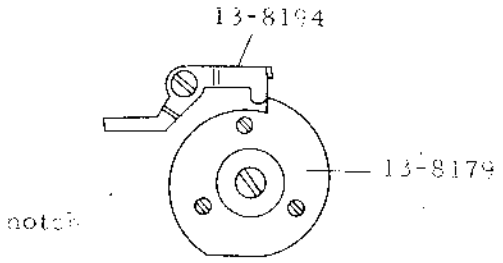
Issued by Service Department, Canon Camera Co., Inc. Date 24th June, 1968

Altered Reflector and Rewind Clamp Lever, Canon FX

Alterations

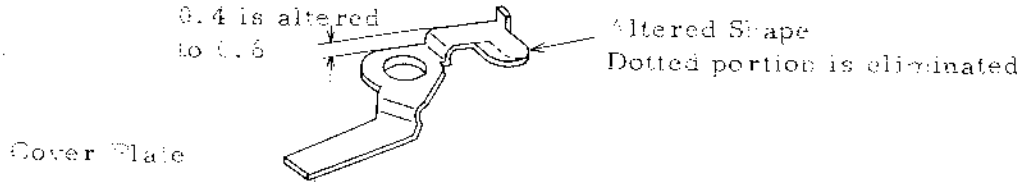
1-1 Altered Rewind Clamp Lever

When winded up, Rewind Clamp Lever gets into notch of Cover Plate 13-8179 so that further winding sometimes becomes incompetent.



And also on the way of winding, the Rewind Clamp Lever gets in under disk and jams with gear so that return of Winding Lever (B.F.) becomes inferior. For the prevention, Rewind Clamp Lever, and Cover Plate are altered as illustrated below.

Rewind clamp Lever
13-8194



The thickness 0.8 is altered to 1.0mm

1-2 Altered Reflector

For the purpose to lighten the finder, the reflection ratio of the Reflector is increased, light in the finder increases about 10% accordingly.

Repairings

The respective present and altered parts of 13-8179 and 13-8194 are not interchangeable. If 13-8194 is replaced to the altered one, replace 13-8179 to the altered one without fail. Specify PRESENT or ALTERED parts when ordering.

Canon SERVICE MANUAL REPORT Serial No. AC10-039E

Service Manual C-010

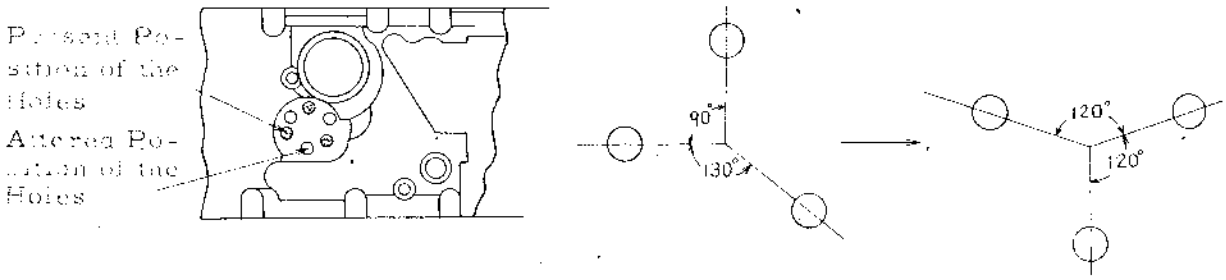
Issued by Service Department, Canon Camera Co., Inc. Date Oct. 29, 1968

Altered Brake Shaft and Body Die Casting, Canon FX

1 Alterations

In order to rationalize the processing of perforation in the Body Die Casting 19-9741, which is made common to the processing for FT and PXQL, the position of the mounting holes for Brake Shaft 13-8068 is altered as illustrated below. Consequently the Brake Shaft is altered to the same one which is used for FT and PXQL.

13-8068 ⟶ 13-8818



19-9741 ⟶ 19-9741-06

2 Repairings

It is not possible to pair neither the present Brake Shaft 13-8068 to the altered Body Die Casting, nor the altered Brake Shaft 13-8818 to the present Body Die Casting. Both present and altered Brake Shafts are stocked for spare.

Canon SERVICE MANUAL REPORT Serial No. AC10-040E

Service Manual C-010

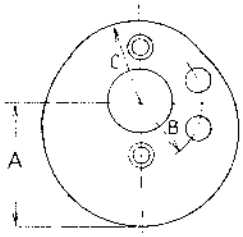
Issued by Service Department, Canon Camera Co., Inc. Date Oct. 29, 1968

Altered Counter Cam, Canon FX

1 Alterations

In order to make the adjustment easier in the assembly and to let the feedings have the end play Counter Cam 19-9689 is altered as illustrated below.

19-9689 19-9689-002



A 8.4 → 8.6

B 4.5R → 4.8R

C 6R → 5.8R

Repairings

The present part is interchangeable with the altered part.

SERVICE No. 131-032 A1 68.10 1500

Canon SERVICE MANUAL REPORT

Serial No. AC10-0412

Service Manual

Issued by Service Department, Canon Camera Co., Inc.

Date 7th March, 1969

Modified Screws, Canon FX

The parts numbers reported by AC10-037 on 28th May, 1968 are again modified for lasting number as follows.

Number Reported by AC10-037		Number Modified Here
Screw 220321	——→	X27-170256
Screw 220326	——→	X29-140506
Screw 220319	——→	X28-170406
Screw 220321	——→	X29-170256
Screw 220324	——→	X23-170256
Screw 220618	——→	X99-0013

Canon SERVICE MANUAL REPORT

Serial No. AC10-042E

Service Manual C-910

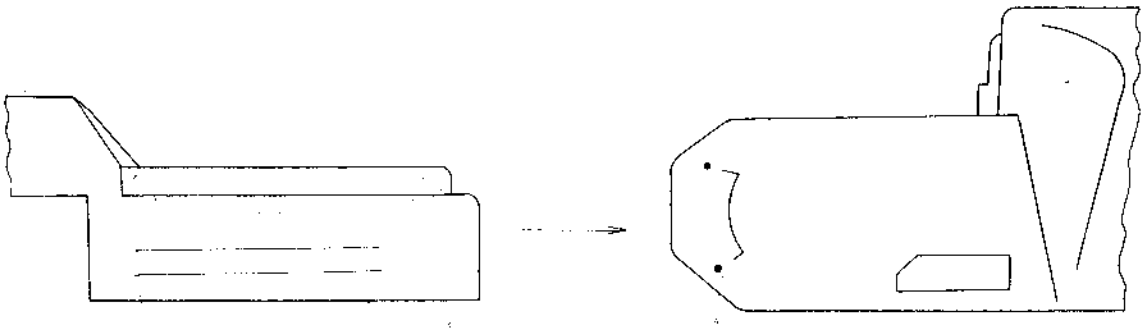
Issued by Service Department, Canon Camera Co., Inc.

Date 2nd April, 1969

Modified Top Cover and Base Plate, Canon FX

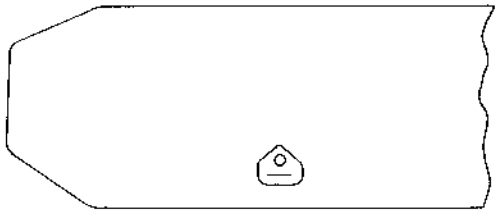
Modifications

With the alteration of the name, the top cover and the base plate are modified. The carving CANON CAMERA COMPANY, INC. NO. 100001 MADE IN JAPAN on the backside at right hand side of the cover is abolished, but 100001 is put on the surface at left hand side instead and CANON JAPAN is also put on the surface of the base plate.



CANON CAMERA COMPANY, INC.
NO. 100001 MADE IN JAPAN
19-3517

19-9517-14



19-9521-05

Assortments of the top cover and the base plate assembled in the cameras are the following three kinds for the time being.

1 Current top cover and current base plate
2 Current top cover and modified base plate
3 Modified top cover and modified base plate

2 Repairings

The stock of the current parts will be gradually switched over to the modified ones.